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RAINIER APPLE
For full description see page 7

WASHINGTON NURSERY CO.
*Hardy, Healthy, Well-Rooted
Fruit and Ornamental Trees*
TOPPENISH — WASHINGTON



SEVENTH EDITION

COMPLETE DESCRIPTIVE BOOK

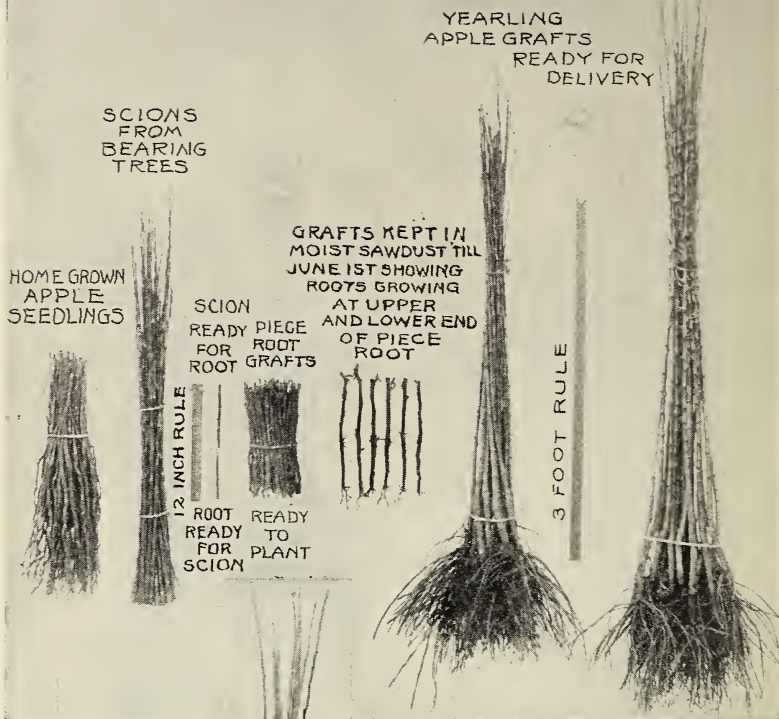
Apples, Cherries, Plums
Prunes, Pears, Peaches
Raspberries, Blackberries
Strawberries

AND OTHER FRUITS AND BERRIES



*Shrubs, Vines, Roses
Flowering Plants and Bulbs, Shade Trees
for the West and Northwest*

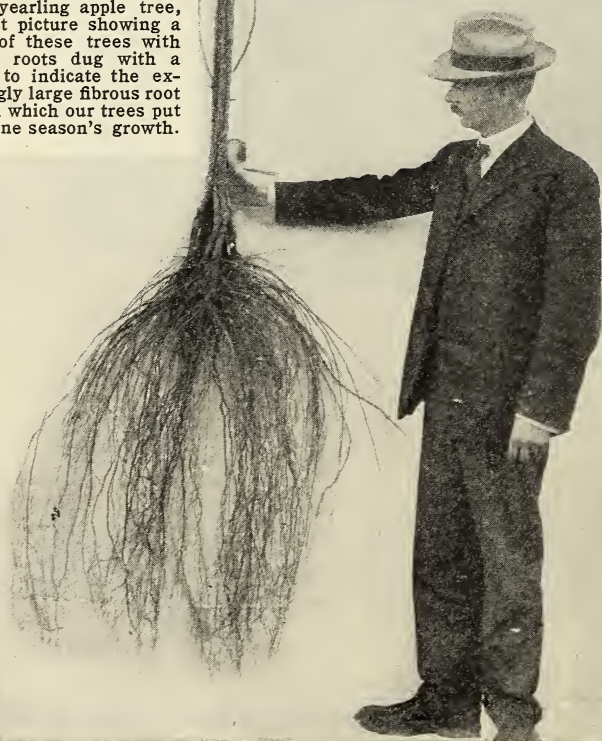
Washington Nursery Company
TOPPENISH • WASHINGTON



Building a Grafted Apple Tree

Here is shown the yearling apple graft from its inception as a seedling through the grafting process and its final completion as a full yearling apple tree, the last picture showing a group of these trees with all the roots dug with a spade to indicate the exceedingly large fibrous root system which our trees put on in one season's growth.

YEARLING APPLE GRAFTS DUG WITH SPADE SHOWING ENTIRE ROOT SYSTEM DEVELOPED IN 8 MONTHS FROM PLANTING



Now Is the Time to Plant Fruit

It took the war to demonstrate the fact that fruit should have a definite place in the diet of every family. Its food value has been established, and it is no longer considered a luxury. The Department of Agriculture strongly advocates the planting of sufficient fruits to supply home needs whether in the country or in town, and among other remarks makes the following statements:

"Well-ripened, sound fruit is healthful. It is also a valuable food. It should form a part of every meal, fresh when possible, or dried, canned, or otherwise preserved.

"Home-grown fruit is desirable—

"Because it reaches the family fresh and in the best possible condition.

"Because the family has fruit of which it would often be deprived if it had to be purchased.

"Because, if the proper varieties be selected, a continuous supply of fruit of superior quality may be secured, regardless of market prices.

"Because any surplus may be sold without difficulty, or may be canned, evaporated, or otherwise conserved for use when fruit is not available."

Due to recent high prices for all classes of fruits, fruit-growing has received a tremendous stimulus. During the war many old orchards were neglected and planting practically stopped; consequently production declined alarmingly. Statistics show that the mortality among fruit trees in the United States is approximately ten million annually, and that since 1912 there have not been sufficient trees planted to make up this annual wastage; therefore we have actually been losing ground as a fruit-producing nation.

Fruit-growing in commercial fruit districts is now being conducted along more safe and scientific lines than formerly. The business is fascinating because it lends itself to intensive application. By right business methods in selecting location and varieties to plant, by proper care in pruning, spraying, and cultivating, picking, packing, and marketing, one can be sure of greater net returns per acre than from any other method of farming. The novice, if he approaches the subject with an open mind, finds expert advice readily available in the Horticultural Department of his State College or from his County Horticultural Department, and can avoid the pitfalls which befell so many a decade ago when commercial fruit-planting was practically in its infancy.

Almost every district in the Northwest has now demonstrated in what fruits it can excel, so there is little chance of error in selecting varieties.

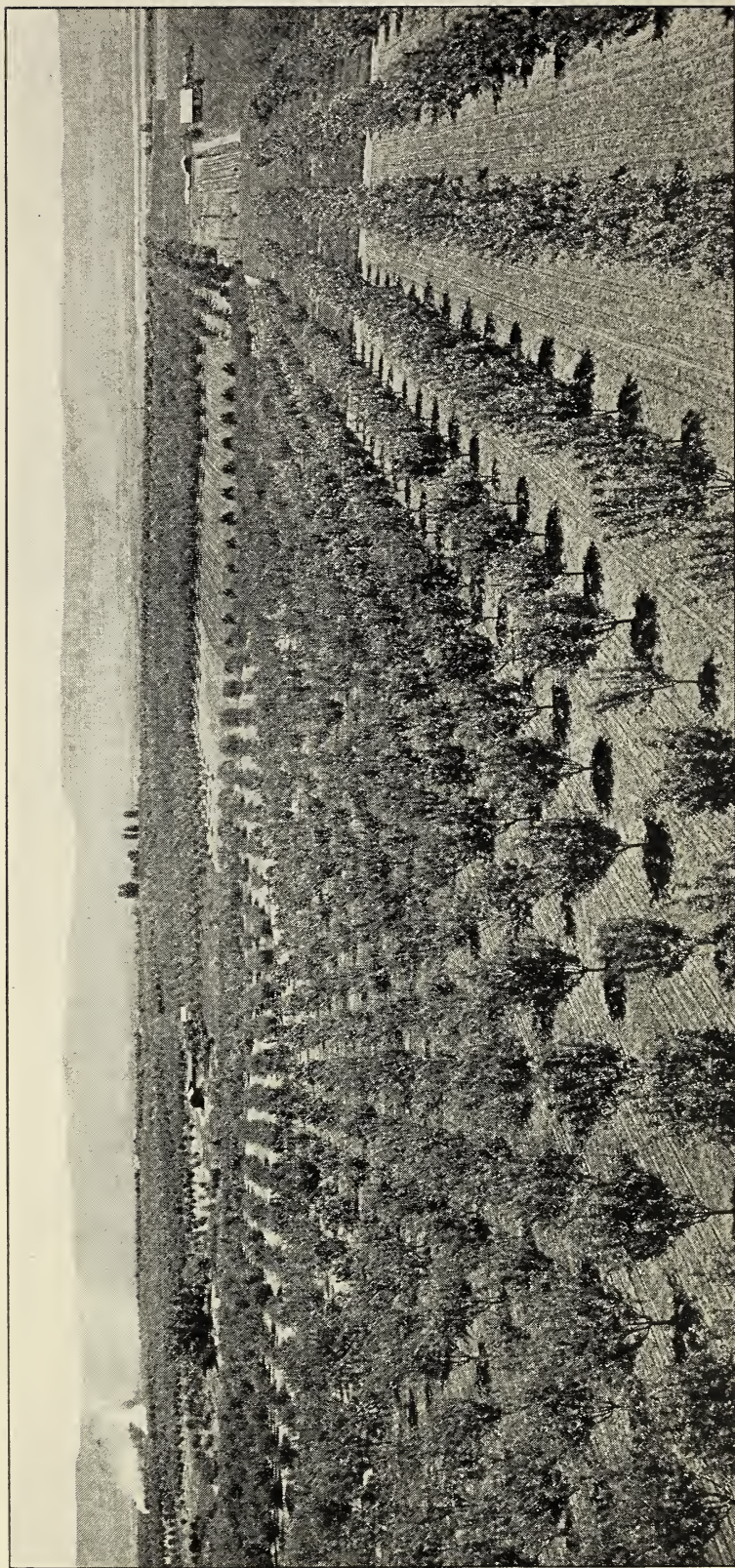
Not all districts are adapted to commercial fruit-growing, but in almost any locality one can raise enough of the various fruits for home use and a little to sell at a profit to less far-sighted neighbors.

Every farm should have a family orchard. It will repay tenfold the initial cost and the care necessary each year.

Many Varieties Not Necessary So many new varieties of fruit have been offered in the past fifty years, most of them of no more merit than many standard sorts, thereby causing confusion and, in some cases, loss to the grower because he could not market his fruit, that we have decided to propagate and offer only those of unquestioned merit. We have studied this carefully and conscientiously, and our stock list comprises only varieties that have stood the test of time and that will give absolute satisfaction.

The biggest advantage in planting only standard varieties in the home orchard is in finding a ready market for any surplus.

Fruit Profits No other branch of farming offers such profits as fruit-growing. It does well alone, or it makes an ideal combination with general farming, chicken-raising, or dairying. Or if one has an acre or two near town or a few vacant lots, much fruit can be profitably raised at little cost. It well repays one's best efforts, and many instances have been known the past few years where the crop netted more than had been asked for the land.



"Planting for Profit." These thrifty Washington Nursery trees are now in full bearing and have increased the value of \$100 per acre land to \$1,000 an acre

Washington Nursery Co., Toppenish, Washington

The following instances selected at random from farm papers during recent months indicate the possibilities of this fascinating business. Remember that

"What Man Hath Done, Man Can Do"

Wapato, Wash. Sawyer & Wise took 1,300 boxes of Anjous, which sold for \$3 per box, from fifty-four trees twenty years old.

Parker, Wash. Thompson Fruit Co. made \$3,355.95 profit from 1.37 acres of Winter Nellis Pears. From 190 eleven-year-old pear trees they harvested 2,097 boxes, which netted \$1.60 per box, or \$17.66 per tree.

Toppenish, Wash. Fifty-eight Flemish Beauty Pear trees, ten years old, on the R. E. Sutherland place produced 832 boxes which sold for \$2.50 per box. Total, \$2,080.

Grandview, Wash. Five and seven-tenths acres of Winesaps near here, purchased last spring for \$350 per acre, were more than paid for in one season by the crop harvested last fall.

Grandview, Wash. W. R. Rowe bought 26 acres for \$800 per acre, harvested \$25,000 worth of apples this fall, and resold for purchase price after owning the place just three months.

Yakima, Wash. W. W. Scott of lower Naches got \$3,000 gross for cherries from about 200 trees, which were planted on less than 2 acres. John Hamberg got \$2,730 from two acres of Bing, getting 17 cents per pound.

Hood River, Ore. J. E. Ferguson harvested 12,000 boxes of apples from 20 acres which brought a gross revenue of \$24,000.

Hood River, Ore. H. L. Shoemaker got \$35,000 returns from his 40-acre tract.

The Dalles, Ore. The local cannery purchased 500 tons of cherries, paying 15 cents per pound therefor.

Sunnyside, Wash. \$1,900 netted from 2½ acres of grapes last year nearby.

Salem, Ore. Mrs. Jennie M. Thomas harvested 35,000 pounds of cherries last season from her 6-acre orchard, which sold at an average of 10 cents per pound. She figured about one-third of the income as production cost, which left her a nice net profit.

Salem, Ore. R. L. Hart says he usually nets \$125 to \$150 per acre from his strawberries.

California. Prices fixed for canning pears by the California Pear Growers' Association are \$100 per ton for first grade.

Toppenish, Wash. E. W. Silvers netted \$15,000 from his 7-acre Italian Prune orchard last season.

Yakima, Wash. C. L. Glidden received \$1,925 from 1 acre of twelve-year-old Bing, Black Republican, and Royal Ann Cherries. He also sold \$75 worth of other produce raised on the same acre.

Yakima, Wash. Warren F. Flagg netted \$1,703 from 1 acre of Winter Nellis Pears.

Yakima, Wash. \$1,428 worth of Bing and Royal Ann Cherries were sold from three-fifths of an acre by C. A. Westaby. As these were sold loose, thus eliminating the expense of packing and boxes, a good net profit was made.

What other crop can one plant that will so quickly increase land values? An apple tree when in full bearing should yield at least 15 boxes per tree, much more in many localities and under proper management. If one nets only 50 cents per box, or \$7.50 per tree, it is equivalent to 10 per cent interest on a \$75 investment per tree. To be conservative, cut all these figures in half and there is still a valuable asset.

Proper Management The commercial fruit-grower should not overlook these two words, for no matter how good the trees or how well selected, if not properly planted, pruned, thinned, or sprayed, they will undoubtedly result in disappointment. If not sprayed for scale or codling moth, much of the crop will be unmarketable. If not properly thinned the fruit may be of good quality but too small to bring the best price.

No Over-Production The cry of "over-production" worries only the one who grows poor grades. There is always a ready market for choice fruit, attractively packed.

Fruit and Ornamental Trees for the Northwest

Washington a Leading State in Fruit

In 1919 Washington stood first in the production of apples, second in the production of pears, and third in the production of peaches. We take a pardonable pride in mentioning that this nursery, the largest in the state, has furnished hundreds of thousands of the producing trees which give Washington such an advantageous position in the list of fruit-producing states.

Commercial Orchards Planted with Our Stock

Many of the largest commercial orchards in the Northwest were planted almost exclusively with our healthy, hardy, well-rooted, guaranteed true-to-name trees, and the profits which these orchards have returned to their owners is due in no small measure to the quality of the stock we furnished.

Largest in the State

There is a reason for success. It doesn't just happen, and one reason for our success is that we have "stuck" through thick and thin, through the heart-breaking years following the slump in planting in 1912 when the majority of so-called nurseries, like the Arabs "folded their tents and silently stole away," because we had faith in the fruit business and in our own business, the very foundation of the great fruit industry. We also felt that our rigid policy of square dealing with justice and protection to all was absolutely right and would ultimately be recognized by discriminating planters. We've been right here since 1903 and our present leading position is evidence that our policy is appreciated by our thousands of customers in all parts of the West.

Revival of Irresponsible Nurseries

The opening of new irrigation projects and high prices of fruit will stimulate planting and inevitably result in many irresponsible people starting so-called "nurseries," hoping for a quick clean-up and a "get-away" before prices fall. Having no prestige or standard to maintain, giving their customers no protection, "skimping" the care of their stock so they can undersell their competitors (for they cannot talk quality but must depend on low prices to get business), they are a serious menace to the orchard business, for they destroy confidence in the legitimate nurserymen who are laboring incessantly for the building up on a solid and substantial basis the orchard and nursery business. The orchardist has no protection whatever in purchasing from such concerns. Planters should heed well the following statement made by the *Country Gentleman*, Sept. 27, 1919:

"A thoroughly good tree or bush is worth whatever you have to pay for it; the first bushel, or the first quart will pay for it. A poor or undependable plant is worthless at any price."

High-sounding guarantees are worth no more than the company behind them. Remember that. Our record of fair and square dealing since 1903 is your best assurance that you will be treated right when dealing with us.

Right along this line the California State Commission of Horticulture in its Monthly Bulletin, Vol. 7, No. 5, says:

"In buying trees it is well first of all to know the nurserymen with whom one is dealing. The man who buys cheap trees is laying the best possible foundation for a cheap orchard, as cheap trees, in practically every case, are inferior trees.

"The nurseryman's responsibility for the character of the orchards that are grown from trees that he propagates is very great. When we stop to consider the fact that practically all the orchards are grown from trees that are propagated by nurserymen whose duty it is to know that the trees sold are true to name, free from dangerous insect pests and disease, etc., we can begin to realize that the nurseryman's trade is one of great importance, and that the man who conducts a reputable business represents a type of public servant who is of inestimable value to the horticultural industry of the state or locality where he conducts his business. Conversely the nurseryman who is not reliable and who thinks only of the present and the few dollars that his trade brings him represents a public menace; he retards the progress of horticulture through the dissemination of inferior stock.

"There are hundreds of cases of trees dying after they have been set in the orchard, where the blame for their loss has been unjustly attached to the nurseryman. In handling trees it must be remembered that it is unnatural for the root system to be exposed to the air, and every precaution possible should be taken to prevent unnecessary exposure, which will quickly cause a loss of moisture and possible death."

Why Our Trees Excel

Here Since 1903 Time has proven that every statement below will bear the closest scrutiny, and that we have, without question, the finest location for growing good stock it would be possible to obtain, and that we do grow a class of stock absolutely unsurpassed in quality and, without question, free from pest or diseases so common to stock grown in less-favored localities.

Seedlings We have finally demonstrated that we have a location for growing the best apple seedlings it is possible to obtain. Our stock is all propagated on these clean, healthy roots, guaranteeing to our customers the best apple trees it is possible to obtain. We also grow our own pear seedlings from pear seed obtained in Japan. Peach and cherry seedlings are also grown from seed on which we propagate the varieties we sell, so you see we grow from the "ground up" and are in a most favorable position to supply the class of stock desired.

We Irrigate Our Stock So many times is the question asked that we want to emphasize the fact that our trees are grown on irrigated land, which largely accounts for their superior quality.

The average annual precipitation in the Yakima Valley is about 9 inches. But little of this comes during the growing season. The soil is exceedingly fertile, the summers are long, with plenty of sunshine. With water at our disposal, judiciously used, coupled with continuous cultivation, we keep the tree growing during the season in which it should grow. By watering for the last time in August, followed by the same persistent cultivation, we "finish" our trees in a manner that the nurserymen in other sections cannot approach. They are generally compelled to see their trees suffer and their growth retarded during July and August for lack of water, then when they should be "ripening" the tree and hardening the fiber preparatory to digging, the trees often start a fresh growth, due to autumn rains. Our trees meanwhile are fully matured and ready to dig and deliver in prime condition.

Good Will Our greatest ambition is to deliver to every customer more than his money's worth. We often say to our customers: "We like your money—but we like your good will more." We would rather not have your order than to feel that we would fail to satisfy you. We handle from 15,000 to 25,000 individual orders every year, and a complaint from any customer is always promptly adjusted.

Location Ever since we started here, we have expressed our faith in our choice of location for the propagation of nursery stock. Results have proven that we made no mistake, and after eight years' experience growing trees on the Yakima Indian Reservation, in the heart of the far-famed Yakima Valley, we believe there is no spot on the continent more favored for producing healthy, hardy, well-rooted trees.

No Pests or Diseases The Indian lands have been cultivated but a few years, mostly as hay and potato ranches, hence there are no old orchards or forest trees nearby to harbor pests or diseases. This fact will appeal alike to the commercial orchardist or the small planter, as it guarantees clean stock which all should demand. However, as "eternal vigilance" counts in this business as in every other, we take no chances, and are properly equipped with spray outfits to forestall the encroachment of any form of contamination.

Soil is Suitable The soil is a rich, sandy, volcanic ash loam, deep and well drained, with a gravelly subsoil. Lying practically dormant for ages, it has stored in it all the essential elements for plant- and wood-growth; the trees we grow are ample proof of this fact.

Climate Almost to Order The climatic conditions are ideal. Mild winters, early springs, long growing seasons, no late rains to start a new growth of wood, and no damaging frosts till the wood fiber is thoroughly hardened—all combine to produce a well-matured, tough, hardy tree that will stand transplanting under any of the varied conditions to be met with in any climate.

Methods of Cultivation These advantages, together with thorough cultivation under the personal supervision of the management, based on long experience and a practical knowledge of tree and plant life, result in developing trees of splendid fibrous root systems which have made them famous throughout the entire fruit-growing section.

Fruit and Ornamental Trees for the Northwest

Varieties Carefully Separated Of utmost importance to our customers is the assurance that they will obtain varieties ordered. A visit to our nurseries will reveal the care with which we guard against error by a system in grafting, planting, budding, digging, and shipping that is as near perfection as we can make it. All of this is the outgrowth of years of experience in the growing and handling of trees, and in office management.

Our Organization Growing, selling, and delivering departments are each in charge of a member of the company, an expert in his line. This insures to each and every customer that his trees will be properly handled and that his order will receive careful attention; also that he may depend upon receiving the kind and quality of stock ordered. We keep an exact count of the total trees in each variety in our plant, aggregating the sales and checking off the totals each week, and when a variety runs low we stop the sale. Thus we avoid over-selling and customers are assured of getting what they order.

Our Packing and Storage House We have room for many carloads of trees in our packing- and storage-house. It has frost-proof walls and roof, so that winter shipments to California and Arizona may continue uninterrupted, while late spring shipments to Montana and other northern sections go out in dormant condition even when held by request until trees outside are in full leaf.

Inquiries and Letters All inquiries for stock are handled by our Sales Department, and every attention is given to written or personal requests for information, as we take pleasure in furthering the interests of the horticulturists of the country.

Our Salesmen We are represented by salesmen in almost all portions of the West. Our constant aim is to secure the services of honorable, experienced men. Customers will please write us of any misrepresentation on the part of anyone claiming to be our salesmen. If our salesman fails to call on you, write us, and we will gladly give you every assistance in making up your order which can be sent you direct. Prices are the same in either case.

Quality and Prices We are not unaware that you may occasionally be offered stock at slightly lower prices than ours. Our prices are not set by what the other fellow wants to take to save his stock from the brush-pile, but by what it costs to deliver a strictly first-class tree and to back it up with a guarantee that means something. Any land is too valuable to be cumbered with trees of doubtful worth. A mere handful of fruit in the first year's crop pays the first cost of a good tree. The value of a tree cannot be measured by the price.

Selling Reputation When we sell you a tree, we do more than that, we back it with our reputation. Our interest does not cease when you get the tree and we get your money. We have a vital interest in seeing that you get exactly what you order and that the quality is unexcelled. Our constantly increasing business is evidence that this policy is appreciated by careful buyers. Don't take chances by buying "cheap trees." They are invariably dear as a gift. Pay no attention to the price but first assure yourself that you are buying from a reliable company. Your future success and profits from the stock you purchased depend entirely upon this.

We Are Bonded We are regularly licensed and bonded in every state in which we do business.

Member of American Association of Nurserymen This Association stands for certain definite standards, chief among which is the policy of the "square deal" to planters. Look for their trade-mark, which you will find elsewhere in this catalogue, before you buy.

Saving the Roots We cultivate incessantly and deeply to make the roots, and, in digging, set our patent "U" shaped digger at its lowest point, about 18 inches below the surface, to get all we can of them, for we grow those roots to sell, not to keep. It is, of course, impossible to get the entire root system, nor is it desirable. If the planter uses due care, plants carefully, heads his trees properly and gives nature a chance, she will do her part and the immediate recuperation and growth of the transplanted tree will surprise him.



Heeling-in Fruit Trees

Transplanting and After-Care

In taking your trees home from delivery point, do not expose them to sun or wind. Many trees are injured more in an hour at this time than in one or two weeks in transit. Cover them well with straw, burlap, or canvas, and immediately, upon reaching home, heel them in, wetting and packing the ground thoroughly. Take only a few at a time out of the ground at planting-time. A barrel or tub of water in which to keep the trees in the field while planting insures against needless exposure. A little care at planting time will repay you ten-fold in the more rapid and stronger growth of the trees.

Preparation of the Soil

Prepare a rich, deep bed of mellow soil, and have the land sufficiently drained to relieve the roots from standing water. To insure a fine growth, land should be in as good condition as for wheat, corn, or potatoes.

Preparing Trees for Planting

The preservation of the natural balance between tops and roots renders a vigorous cutting back of top absolutely necessary in most cases. Prune off broken or bruised ends of roots, if any (a smooth-cut root granulates or makes ready to extend, sooner than one broken off). Cut back the tops to about one-half the previous year's growth, taking care at all times to prune in such a manner as will tend to develop a well-formed head, sufficiently open to admit air and light freely. One-year-old trees, where there is but one straight stock, should be cut down to the height desired for forming the head.

Planting in Rainy Districts

Make the holes large enough to admit the roots without any cramping or bending. Fine surface soil should be used in covering the roots, and this should be carefully worked among them. Pour in some water when the hole is partially filled. See that the ground is firmly and solidly packed over all parts of the roots, so that there will be no opportunity for dry air or frost to enter and destroy roots deprived of the full benefit of their natural protection. Omission to pack the earth solidly is a more frequent cause of failure in planting nursery stock than any other. Fill the holes full enough to be even with the surrounding surface after the fresh earth settles. Never use manure in contact with roots. Large trees should be staked and tied.

Planting in Irrigated Districts

Have the water in the field ditches and as you fill the hole with earth, run in water and let settle, finally filling and packing, and leaving a dry mulch of earth on top. In these arid and semi-arid localities ground should be kept very moist. Many trees are lost through neglect to give them water at the right time.

After-Culture Grass should not be allowed to grow about young trees or plants. The ground should be cultivated for a space of at least one foot outside the roots. If the ground is poor it should have surface applications of manure. Prune regularly every spring, before the buds swell. Avoid removal of large branches.

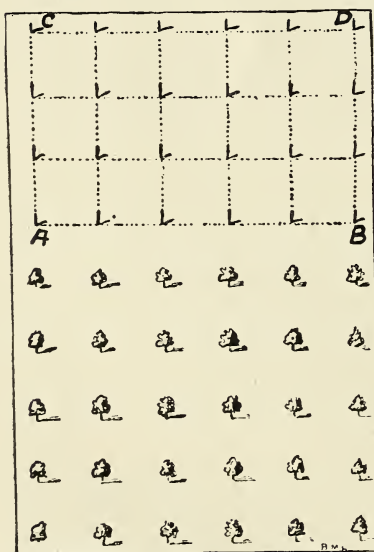
Winter Mulching In the fall, and particularly the first after trees or bushes are planted, the ground should be mulched or covered with a layer of coarse manure or litter 3 to 6 inches deep, over a space 2 feet more in diameter than the extent of the roots. This keeps the earth moist and of even temperature.

Fall Planting In most sections where the thermometer goes 10 degrees below zero, trees delivered to customers in the fall are more or less injured during the freezing weather of winter—lowering their vitality and causing many to die in the first summer after planting, so we will not deliver trees in the fall to cold sections, except when the owner is willing to take all risk and pay freight from nursery.

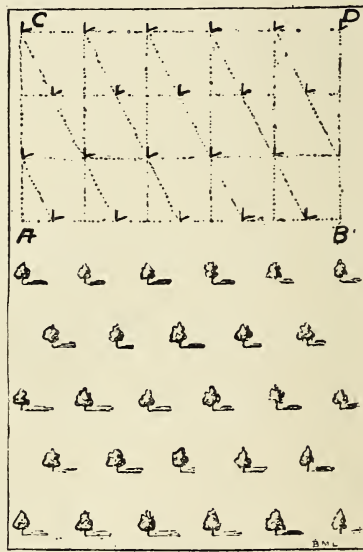
Injured Trees If trees are received in a frozen state, place the package unopened in a cellar, away from frost and heat, until thawed out, and then unpack. If partially dried from long exposure, bury entirely, or place in water for twelve to twenty-four hours.

Planting System Four systems of planting trees, designated as square, triangular, quincunx, and hexagonal, are well illustrated herewith in Figs. 1, 2, 3, 4, after Lelong.

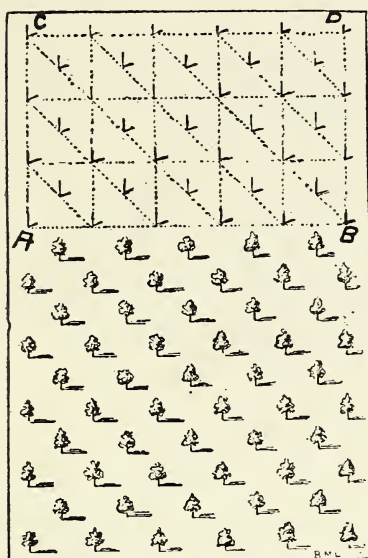
Square System. The first or square system is the most commonly used. Marking the area for planting is easiest under this system, and it has the advantage of allowing plenty of room for hauling, cultivation and other orchard operations between the rows in two directions in the relatively wide spaces at right angles to each other. Lay off the base lines A B and A C along two sides of the planting field in such a manner that the angle at A is an exact right angle and set stakes on this base line desired distance apart. Care must be exercised to have all stakes on true lines. To form a right angle lay off 30 feet from A along base-line A B, then a point on base-line A C will be 40 feet from A and 50 feet from the other end of the 30-foot length. After setting the stakes along the base-lines at planting distance apart, set stakes along secondary lines drawn parallel with base-lines A B, and such distances therefrom as will be multiples of the planting distance required, and at the same time no farther apart than permitted by the length of the planting chain. For a planting chain would suggest No. 19 gauge



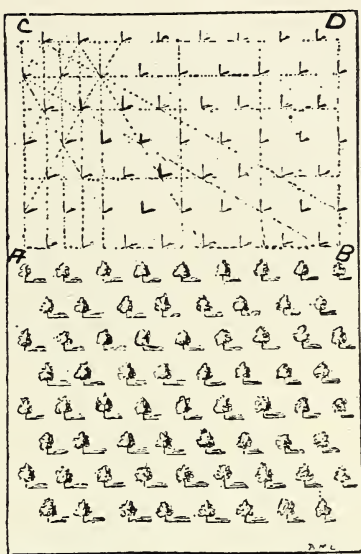
The square system of planting (after Lelong)



The triangular system of planting (after Lelong). See page xi



The quincunx system of planting
(after Lelong)



The hexagonal system of planting
(after Lelong)

stranded wire with numbered metal tags to be inserted at desired distances apart. A 250-foot chain will probably be the best, and it should be stretched for several days before using to prevent too much variation in the field. Have a ring and about 2 feet of surplus wire on each end to facilitate handling. Use iron stake-pins. Lay off a temporary base-line B D from end B of base-line A B and at right angles thereto, setting flags on such temporary base-lines at distances to correspond with the spacing of the secondary lines. With the flags as a guide, lay off the planting stakes on the secondary lines, starting always from base-line A C. Then complete the staking by stretching the chain between similar points on the secondary lines and set the stakes at each tag on the chain previously adjusted.

Triangular or Alternate System. Assuming that the planting distance is to be 24 feet apart, then all stakes on base-line A B will be 24 feet apart. Set alternate stakes on this line for temporary use only. In setting stakes on lines parallel with base A C, the tags of one color should be spaced 24 feet apart, commencing at the zero end. Tags of another color for use on alternate lines should be spaced 24 feet apart, commencing 12 feet from the zero end of the chain.

Quincunx System. The advantage of this method is where one wishes to use a temporary filler. This system permits double the amount of trees to the acre than in the square system. Stake the field in squares. Then place a stake in the center of each square. By sighting along the two diagonal rows of stakes this can be done without the aid of the chain.

Hexagonal System. This system is recommended by many because every tree is equidistant from all adjacent trees and about 15 per cent more trees can be set to the acre than by the square method. To illustrate this we will consider that the trees are to be set 24 feet apart. Then on base-line A B set stakes 24 feet apart. On base-line A C set stakes 0.866 times the planting distance apart, or every 20.784 feet, which is equivalent to 20 feet and 9 inches. The first stake on the intermediate line should be 12 feet from the base-line A C and 20 feet 9 inches from base-line C D. Use tags of two different colors in staking, one starting at zero and the other .5 the planting distance from the zero end of the chain. To find required number of plants per acre by this method, first figure the number required by the square method, using the same planting distance, then divide by the decimal .866. The result will be the number of plants required per acre. To illustrate the



World's Champion Winesap tree

Six boxes of the fourteen produced by this Winesap tree won the Grand World's Prize at the Panama-Pacific Exposition at San Francisco, 1916. The tree had been purchased from the Washington Nursery Company seven years before by Fred Conklin, of Brewster Flats, near Monse, Wash. Hundreds of thousands of our trees are bearing profitable crops for their owners in all parts of the Northwest.

distance of the secondary line from the base-line in this system, the following table will undoubtedly be of great help.

18 ft. apart on base-line, secondary line should be	15 ft. 7 in. from base-line
20 " " " " " " " " " "	17 " 4 " " " " "
22 " " " " " " " " " "	19 " 1/2 " " " " "
24 " " " " " " " " " "	20 " 9 " " " " "
28 " " " " " " " " " "	24 " 3 " " " " "
30 " " " " " " " " " "	26 " 0 " " " " "
36 " " " " " " " " " "	31 " 2 " " " " "
40 " " " " " " " " " "	34 " 8 " " " " "

Now Just a Closing Word

Fruit-growing is such an easy method of getting money from the land that the beginner may overlook certain fundamental points. Not intentionally, but because he sees how readily his neighbor grows, harvests and markets the crop, and so assumes that the trees were planted, grew, and bore fruit.

There are **three** essentials in fruit-growing. The first is the **quality and character of the tree planted**.

The second is the **preparation of the land**. While the time and labor put into the first preparation of the ground may seem to the inexperienced orchardist an unnecessary expense, it is indeed one of the best investments he can make, for it will in a large degree insure his future success.

The third essential is the **after-care given the trees**. We have endeavored to give some hints on this subject, but if you need further help don't hesitate to write us.



Apple grafts in midsummer

Fruit Department

Apples

Apples are probably the most important fruit. They thrive on any well-drained soil, and by making a judicious selection of varieties one may have fresh fruit nearly the year around. There is no farm crop, which, on the average, will produce one-fourth the income per acre of a good Apple orchard. If your land is adapted to fruit-growing, plant Apples and other fruits and be independent.

**Our well-rooted, thoroughly matured, healthy, hardy trees
are guaranteed to give satisfaction**

Every farm should have enough of the early, medium, and late varieties for home use and some to spare.

Soil and Location. The best soil for the Apple is a deep, rich loam, well-drained, which will permit full root-extension and development and is free from stagnation. No tree will thrive with its "feet in water." Extremely light soils are to be avoided.

Pruning and Shaping the Tree. A hard and fast rule cannot be made for different varieties which differ in their habits of growth and require different treatment. The Washington State College summarizes:

"The best place to study pruning is in the most productive orchards in the community. Study there the system of pruning that has been practised on the best and most satisfactory producing trees. Become acquainted with the habits of growth of the different varieties and the form of the tree at different ages. Adopt a system of tree development that has given satisfactory results in your community in the quantity and quality of fruit produced. Systems of pruning recommended by fruit-growers from different sections than yours may not be at all satisfactory in your district. A system once adopted and established should not be changed except for very good reasons."

The following general rules will be helpful and can be followed with safety. They are the result of long experience over a wide territory.

Cutting Back. As soon as planted, cut back to a straight stock about 3 feet high. This should determine the height of the trunk. The upper buds left will usually be the ones to produce the branches that will form the permanent framework of the head. These branches should be distributed through a space of at least 12 inches downward from the top. Branches that are only 3 or 4 inches apart on the young tree will be too close together by the time they are 4 or 6 inches in diameter.

First Winter. The following winter trim back all branches at least one-half, pruning for the first two years to an outside bud. Thin out the top where the number of branches growing is so great as to cause the limbs that are more or less permanent to be slender. Small side shoots should not be removed because of their value in developing and making more stocky the main branches to which they are attached.

Second Winter. Beginning with the second winter, pruning should be mostly corrective in its character. Prune out wood where none is

Fruit and Ornamental Trees for the Northwest

wanted and correct faulty distribution of branches. The main business of the tree during the period of development before heavy fruit production begins is to produce wood, or to grow, and for this purpose an abundance of foliage and small twigs are necessary. However, all branches that interfere with the framework should be removed.

Later Pruning. From the time of the second winter's pruning until fruit production is established, pruning should be done with the idea of training to the adopted system more than modifying growth. Most of the work should be done in the winter, but constant attention throughout the year is necessary to have the trees make the most rapid permanent progress. The tops should be open enough to let a little of the direct rays of the sun reach the ground beneath. Cutting back the tips of the branches makes them sturdier; the fruit is carried nearer the trunk, and little propping is necessary, though the crop be heavy.

Apple Industry Becoming Stabilized. Apple-growers in commercial orchard districts are "getting down to brass tacks." They are marketing their fruit in a scientific manner and securing the maximum returns. The orchards of Europe are in a badly run down condition, and Europe will take all our surplus Apples for years to come at a good price. Modern storage facilities are being provided in marketing and growing centers to prevent glutting the market. Ask any real up-to-date grower how he views the future. He's an optimist of the first water.

Apples for Different Elevations

The tabulation below is the result of information secured from the Washington State College at Pullman and other reliable sources, and will be a valuable guide for the beginner. In any case, before making extensive plantings be sure to make thorough local inquiry and select varieties which have proven best adapted to your particular locality.

VARIETY	West of Cascades	Inland Valleys	Inland Uplands
Alexander			×
Arkansas Black		×	
Baldwin	×		
Bellflower, Yellow	×		
Bismarck	×	×	×
Black Ben Davis (Gano)			×
Delicious		×	×
Duchess of Oldenburg		×	×
Early Harvest	×		
Fameuse (Snow)		×	×
Gravenstein	×	×	×
Grimes Golden	×		
Jonathan		×	×
King	×	×	×
McIntosh			×
Mottinger	×	×	
Newtown Pippin	×	×	
Northern Spy	×		
Northwest Greening		×	×
Oregon Red Winter	×		
Rainier		×	
Red Astrachan	×	×	×
Red Gravenstein	×	×	
Red June	×	×	
Red Rome Beauty		×	×
Rhode Island Greening	×		
Rome Beauty		×	×
Spitzenburg		×	
Talman's Sweet			×
Wagener	×		×
Wealthy	×		×
White Winter Pearmain		×	×
Winesap		×	
Winter Banana	×	×	×
Wolf River			×
Yellow Transparent	×	×	×
Transcendent	×	×	×
Whitney's	×	×	×
Yellow Siberian	×	×	×

When an Apple Is Ready for Use

The following article by Prof. W. S. Thornber, formerly of the Washington State College, will be of great value in indicating the chief merits of the staple varieties of Apples, and when they are ready for use.

Ripening seasons vary for any given variety according to altitude, temperature, and soil. For example, a Jonathan grown in a low, warm valley on sandy soil will be past its prime before December 1, while one from a higher altitude on clay loam may be at its best for the holiday trade or even later.

Another factor rarely taken into consideration is that long before an Apple is ready for eating it may be at its best for cooking and baking, and when it is ready for eating it may be too ripe for the best cooking.

The Rome Beauty is now recognized as the very best baking Apple, particularly the large-sized fruits, and it is now being extensively used by the best cafés and hotels for that purpose. The Arkansas Black is another excellent baking Apple.

VARIETY	Season	Condition	Dessert	Sauce	Baking
Yel. Transparent	Aug., Sept.	Unripe Ripe	Good Excellent	Excellent Good	Poor Poor
Duchess	Aug.-Oct.	Unripe Ripe	Poor Excellent	Excellent Good	Poor Good
McIntosh Red	Sept., Oct.	Unripe Ripe	Good Excellent	Excellent Good	Good Poor
Winter Banana	Oct.-Dec.	Unripe Ripe	Good Excellent	Poor Poor	Poor Poor
Delicious	Oct., Nov.	Unripe Ripe	Good Excellent	Good Poor	Poor Poor
Jonathan	Nov., Dec.	Unripe Ripe	Good Excellent	Excellent Good	Good Poor
Grimes Golden	Nov.-Feb.	Unripe Ripe	Poor Excellent	Excellent Good	Good Poor
Stayman	Dec.-Feb.	Unripe Ripe	Poor Excellent	Excellent Good	Good Poor
Spitzenberg	Dec.-Jan.	Unripe Ripe	Good Excellent	Excellent Excellent	Excellent Good
White Winter Pear- main	Dec.-Mar.	Unripe Ripe	Poor Excellent	Good Poor	Good Poor
Rome Beauty	Dec.-Apr.	Unripe Ripe	Poor Good	Excellent Good	Excellent Good
Yellow Newtown	Feb.-May	Unripe Ripe	Good Excellent	Excellent Excellent	Excellent Good
Winesap (common)	Feb.-Apr.	Unripe Ripe	Good Excellent	Excellent Good	Excellent Good
Wagener	Feb.-May	Unripe Ripe	Poor Good	Excellent Good	Excellent Poor
Arkansas Black	Feb.-May	Unripe Ripe	Poor Poor	Excellent Poor	Excellent Good
Ben Davis	Feb.-May	Unripe Ripe	Poor Poor	Good Poor	Good Poor

Dates for Picking and Consumption of Apples

The following tables were compiled by Charles L. Hamilton, for the Yakima Valley Fruit Growers' Association, and show the dates for picking and dates when the Apples are ripe for consumption. This information is secured from Lowther's Encyclopedia of Practical Horticulture. Of course, climatic and soil conditions vary so that these dates will not apply in all sections. However, relative time of ripening of one variety compared with the other is the same in all districts so that one can easily ascertain in his own district the approximate time for picking and the ripening period. Apples grown in a higher altitude will keep longer than those grown in a lower altitude.

SEE NEXT PAGE FOR TABLE

Fruit and Ornamental Trees for the Northwest

EARLY APPLES

VARIETY	Color	Date for Picking	Use	Month of Maturity
Alexander	Yellow, red stripe.	Aug. 1 to Sept. 1.	Culinary.	September, October.
Astrachan	Green, red stripe.	July 17 to Aug. 15.	Dessert and culinary.	August, September.
Duchess of Oldenburg	Red-striped.	July 18 to Aug. 2.	Dessert and culinary.	August, September.
Early Harvest	Light yellow, blushed.	July 18 to Aug. 3.	Dessert and culinary.	August, September.
Fameuse (Snow)	Red.	Aug. 9 to Sept. 10.	Dessert.	September, October.
Gravenstein	Yellow, red-striped.	Aug. 10 to Sept. 10.	Culinary and dessert.	August, September.
Red Gravenstein	Red.	Aug. 17 to Aug. 25.	Dessert.	September.
Red June	Red.	July 25 to Aug. 3.	Dessert.	July, August.
Wealthy	Red.	July 25 to Sept. 1.	Dessert and culinary.	September, October.
Red Astrachan	Green, red-striped.	July 17 to Aug. 15.	Dessert and culinary.	August, September.
Wolf River	Red-striped.	July 11 to Sept. 1.	Culinary.	September.
Yellow Transparent	Yellow.	July 11 to Aug. 1.	Dessert and culinary.	July, August.

WINTER APPLES

Arkansas Black	Dark red.	Sept. 25 to Oct. 15.	Market.	March, May.
Bellflower Yellow	Yellow bluish.	Aug. 25 to Sept. 15.	Market and culinary.	October, November.
Bismarck	Red splash.	Aug. 20 to Sept. 10.	Culinary.	September, October.
Baldwin	Bright red.	Sept. 5 to Oct. 1.	Market and dessert.	November, December.
Delicious	Red and yellow.	Sept. 15 to Oct. 15.	Market and dessert.	November, December.
Gano (same as Black Bon)	Red to dark red.	Sept. 1 to Oct. 1.	Market.	February, March.
Grimes	Yellow.	Aug. 25 to Sept. 20.	Dessert and culinary.	October, November, December.
Jonathan	Bright red.	Sept. 1 to Sept. 25.	Dessert and market.	November, December.
McIntosh	Bright red.	Aug. 20 to Sept. 15.	Dessert.	September, October.
Northern Spy	Red-striped.	Sept. 1 to Sept. 20.	Dessert and culinary.	October, November.
Northwestern Greening	Green.	Sept. 15 to Oct. 1.	Culinary.	January.
Oregon Red	Green.	Sept. 1 to Sept. 25.	Culinary.	January.
Rhode Island Greening	Green with red mottled.	Sept. 15 to Oct. 5.	Culinary and market.	December, January.
Rome Beauty	Red over yellow.	Sept. 15 to Oct. 5.	Dessert and culinary.	November, December.
Early Spitzenberg	Greenish yellow, covered by dull red stripes.	Sept. 15 to Oct. 10.	Dessert and culinary.	January.
Stayman	Yellowish green.	Sept. 15 to Oct. 1.	Dessert.	November.
Tolman	Red over yellow.	Sept. 5 to Sept. 25.	Dessert.	November.
Wagner	Deep red.	Oct. 1 to Oct. 20.	Culinary and market.	February, March, April.
Winesap	Clear yellow, pinkish red cheek.	Sept. 20 to Oct. 1.	Dessert and market.	December, January.
White Banana	Pale green to white, slight blush.	Sept. 20 to Oct. 1.	Dessert.	December, January, February.
White Winter Pearmain	Yellow, slight pink blotch.	Sept. 25 to Oct. 20.	Dessert, culinary, market.	February, March, April.
Yellow Newton				

CRAB-APPLES

	Date for Picking	Size	Color
Siberian Yellow	Aug. 16 to Sept. 3.	Small.	Yellow blushed.
Transcendent	July 26 to Aug. 22.	Medium.	Yellow blushed.
Whitney	July 31 to Aug. 23.	Very large.	Yellow, red striped.



Duchess of Oldenburg

Summer Apples

Early Harvest. Yellow; medium to large. Good quality. Very hardy.

Mottinger. New. Very large; greenish yellow, streaked with red when fully ripe. Ready for use early July just after Yellow Transparent. Season extends seven or eight weeks, by which time it attains its fullest size.

RED ASTRACHAN. Yellowish red, somewhat striped; medium to large. Very early. Excellent cooker before fully ripe. Very hardy.

Red June. Deep red; small. Subacid flavor; good eating; flesh tender.

YELLOW TRANSPARENT. Greenish yellow. First summer Apple on market, and best of all early varieties. Excellent keeper and shipper for a summer variety. Have been shipped from here to St. Paul, Minn., arriving in fine condition. In early fruit districts often nets the grower more than winter varieties. Tree vigorous grower, heavy bearer. Thrives under all conditions; absolutely hardy. Should be planted by everyone for all surplus Apples find a ready sale.

Autumn Varieties

Alexander. Large; red or striped. Coarse texture; good cooker. Extremely hardy and vigorous.

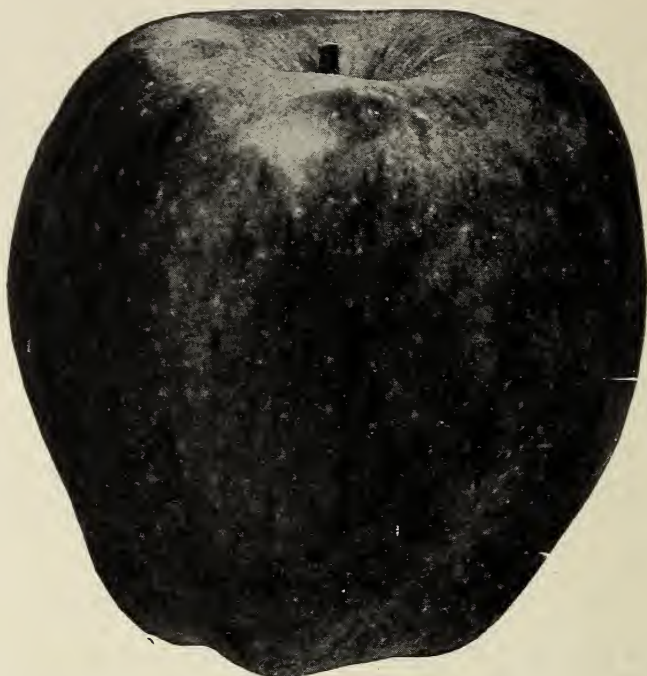
DUCHESS OF OLDENBURG. Medium size; streaked red and yellow. Flesh white and juicy. Extra-good quality. Very hardy.

Fameuse (Snow). Medium size; whitish ground, striped with deep red. In its season one of the most desirable dessert Apples. Very beautiful. Flesh white, tender. Very hardy.

GRAVENSTEIN. Large; orange-yellow overlaid with broken stripes of light and dark red. Has no superior for cooking or eating. Crop ripens continuously over a period of several weeks, necessitating three or four pickings. Very productive.

KING. Large and handsome; striped red and yellow. Very productive. One of the best late fall Apples for west of Cascades. Excellent for cooking and eating.

RED GRAVENSTEIN. Large; has all the good qualities of the regular Gravenstein, but has a bright red coat, making it a more desirable market variety, for a red Apple is always the best seller. One of the large orchardists near Walla Walla states he makes more money from his 15 acres of this variety than any similar area of other varieties in his orchard. This is a sport from the old Gravenstein but comes absolutely true to type when propagated by grafting.



Delicious Apple

Winter Apples

These are the late-keeping varieties, many of them keeping until spring in common cellar storage and some until midsummer. Most of them keep quite late if put in cold storage. As a general rule, Apples grown in the higher elevations are the best keepers.

Arkansas Black. Large; deeply colored reddish black; very beautiful and attractive. Fine keeper and shipper. Fair eating but good cooking and good market variety. April and May.

Baldwin. Large; red. Juicy; crisp; subacid. Vigorous grower; very productive. Excellent for west of Cascades. December and January.

Bellflower, Yellow. Large; yellow. Flesh tender, juicy, and good. December and January.

Bismarck. Large; yellowish red. Flesh tender. Bears very young.

Black Ben Davis (Gano). Deep red. Vigorous. Very hardy. Good.

DELICIOUS. Large; dark, brilliant red. One of the best of the new introductions. Seems to thrive in all sections, highlands or lowlands. Needs plenty of sunshine to color well. Flesh crisp, fine-grained, juicy; flavor slightly acid but very pleasing. Vigorous grower. December to January.

GRIMES GOLDEN. The winter-evening Apple. Extra good; excellent flavor; medium to large. Vigorous grower. Very hardy. January to March.

JONATHAN. Justly famous as an extra-good eating Apple. Medium size; brilliant red. Highly flavored; juicy; fine-grained; tender; mild subacid. November, December.

McINTOSH. Medium to large; bright, deep red. Flesh white, juicy, acid. Heavy bearer. Extra good. Suitable for high elevations. Hardy.

Newtown Pippin. Large; yellowish green. Very juicy; crisp; deliciously flavored. Excellent quality; long keeper. Rather late in coming into bearing.



One of our three-year-old Wagner Apple Trees. A splendid example of the profit in planting our guaranteed stock. Such trees are worth any reasonable price, but cheap, inferior stock would be dear as a gift.

WINTER APPLES, continued

Northern Spy. Large; roundish, slightly conical, somewhat ribbed; striped, with the sunny side nearly covered with purplish red. Flesh white and tender; mild subacid, rich and delicious flavor; in perfection in January and keeps till June. The tree is a strong, upright grower, and forms a very compact head; should be kept open by pruning, so as to admit the air and light freely.

Northwestern Greening. Large; yellow; richly flavored. Very hardy.

OREGON RED WINTER. Large; red. Sometimes called the Winter Gravenstein. Fine-grained, crisp, and juicy.

RAINIER. One of the very best of recent introductions. Originated in Yakima Valley. Large; skin yellowish green underneath, with an over-coloring of dark red, slightly streaked. Flesh yellowish, with practically no grain; mild flavored, slightly subacid, with a pleasing aroma. Extra-long keeper, keeping in common storage until April and in cold storage until October. Good to eat from January on. Mr. W. W. Scott, the originator, has a number of these trees, and every year has topped the market with this variety. Mr. F. Eberle, manager of the Yakima County Horticultural Union, states that he considers it superior to any other variety. You won't make a mistake in trying this. We tested it thoroughly before getting the exclusive contract from Mr. Scott.

RED ROME BEAUTY. A sport of the regular Rome Beauty, but different in that it is a brilliant, beautiful red, making it a highly desirable market variety. Don't overlook this if you consider planting Rome Beauty.

Rhode Island Greening. Large; greenish yellow; tender, juicy, and rich; strong grower. Very good. December to April.



Winesap in full bearing

WINTER APPLES, continued

ROME BEAUTY. Large; yellowish red; tender, juicy, sub-acid. Probably one of the best market varieties and planted over an extensive area. An early and heavy bearer and the best baking Apple, being used for this purpose by the large hotels for the fancy trade. December to April.

SPITZENBURG. Medium to large; deep red. Flesh yellow, crisp, subacid, highly flavored, and extra good. Shy bearer. November to February.

Talman's Sweet. Medium size; pale yellow; firm, sweet, and rich. November to April.

WAGENER. Medium to large; deep red; sub-acid; very productive. Does well in higher altitudes. December to May.

WEALTHY. Medium size; red; sub-acid; excellent. Very hardy. October to January.

WHITE WINTER PEARMAN. Large; roundish, oblong, conic; pale yellow, extra high flavor. One of the best. Ranks with the Winesap and Jonathan as a commercial sort. Ships well and is a fine looker. December to January.

WINESAP. Medium; dark red. One of most popular Apples in America. Succeeds almost everywhere, though in higher altitudes is inclined to be small. Bears early, heavily, and regularly, and is one of the most profitable Apples to plant. It has the reputation and a ready sale for it can always be found. Probably unsurpassed for cooking, and is a first-class eating Apple as well. Good keeper and first class in every way. March and April.

Winesap, Stayman's. Similar to Winesap, but much larger and somewhat juicier. Better for high elevations on account of its size. Aromatic and good. Dark red tinged with yellow; medium size. Regular and abundant bearer. December to April.

WINTER BANANA. Large; yellow with reddish cheek; perfect in form; fine grained and of highest quality. November to April.

Wolf River. Large; handsome red. Flesh white and of exceedingly fine quality. Extra hardy. December to January.

Crab-Apples

These are specially adapted to extremely cold sections where only a few varieties of Apples can be successfully grown, but they succeed equally well in all sections. Valuable for cider, preserving, jelly, and some of the improved sorts are excellent for eating. They are all very productive.

Red Siberian. Very large; extra good.

TRANSCENDENT. Remarkably vigorous; immensely productive. Good for cooking and eating. Skin yellow, striped with red; very good.

Whitney's. Large; glossy green, striped and splashed with red. Heavy bearer. Tree vigorous and handsome.

Yellow Siberian. Beautiful golden yellow. Very good.

E. W. Squires, near Toppenish, sold \$45 worth of Crab-Apples from one tree in his back yard last season

Pears

The Pear has long been regarded as one of the most luscious of fruits. Next to the apple it is probably the most popular. Fine flavor, reliability, profit, long life, and general quality make the Pear a staple fruit. Excellent for dessert and culinary purposes, either fresh or canned, the Pear is considered a great acquisition and should be included in every planting.

Harvesting Pears. It is very important that Pears be gathered at the right time. Summer Pears should be gathered at least ten days before they are ripe and autumn Pears at least two weeks before. Winter



This seven-year-old Bartlett produced 9 boxes of delicious Pears.
What a fine income from a small plot of ground



The Sawyer method of pruning. Note the shape of the Pear trees. They spread out like an apple tree and carry their heavy load easily

PEARS, continued

varieties may be left until the leaves begin to fall, then placed in a cool, dry cellar.

Soil. Heavy loams or clay soil are better than the lighter soils, and while they can stand more moisture than some other fruits, yet the soil should be well drained. Where irrigation is practised they should not be watered as late as apples. Try to get them dormant early in the fall.

Pruning. Pears require special pruning on account of the tendency of their branches to grow straight up. By proper pruning one can have Pear trees almost as round-headed as an apple tree. The Pear orchard of W. P. Sawyer, one of the most successful Pear-growers in the Yakima Valley, is a splendid example of this method of pruning. Each winter cut back the previous season's growth to two or three buds, the end bud being an outside bud. It makes the branches grow outward instead of upward and also makes them thick and stocky, enabling them to carry a full load without the use of props. Cut out inside branches also which interfere with circulation of air and proper sunlight reaching the interior of the tree.

Prices. Pears have brought an unusually high price the past few seasons, some of the canneries paying as high as \$80 per ton. While a great many Pear trees are being planted annually, yet for some years the supply has not kept pace with the demand, and on account of the shortage of Pear seed and Pear seedlings there will undoubtedly be a shortage of trees for the next few years.

Summer Varieties

BARTLETT. Large; beautiful golden colored. Flesh buttery, very juicy and highly flavored. One of the finest Pears that grows for dessert or culinary purposes. In great demand for the fresh fruit market and by the canneries as well, thus assuring one of a ready market at all times. Strong grower; heavy bearer. Should be included in every home orchard or on every city lot.

Clapp's Favorite. Large; fine; pale lemon-yellow.

Autumn Varieties

BUERRE BOSC. Large; fine; with long neck. Juicy and delicious. Excellent for home canning. Coming in later than Bartlett it should be in every home orchard collection.

BUERRE D'ANJOU. Large; fine; buttery and melting. Fine grower and good bearer. Extra good.

Comice. Large; yellowish red. Melting, rich.

Flemish Beauty. Large; juicy, melting, rich, and fine. Strong grower and good bearer.

Fruit and Ornamental Trees for the Northwest

AUTUMN PEARS, continued

Idaho. Large; light yellow. Flesh white. Very good.

Kieffer. Seldom blights. Great favorite in the East. Richly colored.

Seckel. Small; rich, yellowish brown. Productive. Rich, pleasing flavor. Fine for preserving and pickling.

Worden-Seckel. Lemon-yellow; smooth, waxy. Keeps well. Hardy.

Winter Varieties

DEMOREST. New. Originated at Tacoma. Larger, 'ater, and better keeper than Bartlett. Very luscious and rich. Highly flavored and good.

WINTER BARTLETT. Much like summer Bartlett, only later and better keeper. Very good.

WINTER NELLIS. Small; yellowish green and inclined to russet. Fine-grained, delicious, rich and extra fine. Enormously productive; very hardy and a profitable variety to plant.

Pear-Picking Time in the Yakima Valley

The picking-time at Yakima for the varieties mentioned below ranges about as follows:

Bartlett	July 30 to Sept. 12
Buerre d'Anjou	Sept. 10 to 20
Clapp's Favorite	July 24 to Aug. 13
Comice	Sept. 10 to 18
Flemish Beauty	Aug. 3 to Sept. 1
Idaho	Sept. 16 to 28
Kieffer	Sept. 21 to Oct. 2
Seckel	Sept. 12 to 28
Winter Nellis	Sept. 28 to Oct. 15
Winter Bartlett	Sept. 28 to Oct. 9

Pear Varieties for Different Sections

VARIETY	Western Ore. or Western Wash.	Inland Valleys	Inland Uplands
Bartlett	×	×	×
Buerre Bosc		×	
Buerre d'Anjou	×	×	×
Clapp's Favorite	×	×	
Demorest	×	×	
Comice	×	×	×
Duchesse d'Angouleme	×		×
Flemish Beauty		×	
Idaho		×	×
Kieffer		×	×
Koonce			×
Seckel		×	×
Winter Bartlett	×	×	
Winter Nellis		×	×
Worden-Seckel	×		

Cross Pollination

It has been definitely established that certain varieties are sterile or partially sterile and need to be cross-pollenized with some other variety which blooms at the same time.

The Bosc should not be crossed with the Bartlett, as the fruit so crossed is apt to be small and misshapen, but when crossed with Comice is large and fine. Bartlett and Anjou do well together. The Winter Nellis and Comice also do splendidly together. The Bosc seems to do well with all varieties except the Bartlett.

Cherries

There are few more desirable fruits than Cherries, and they can be grown for the market with great profit. Prices the last few years have been very high, and the outlook for a higher price is very bright. Sweet Cherries are scarcer than any other and from the seedling outlook will be for years. The desirable sorts for canning purposes, such as the Montmorency, etc., are very heavy bearers and are highly profitable.

Soil. Cherries do better in light rather than heavy soil.

Pruning. Cut back to 24 inches at planting. Allow three or four branches to grow for the head or framework. These should be distributed so as to prevent forks, for the tree has a tendency to split when older. The first winter after planting cut back these framework branches at least one-half, and the following winter cut off all branches from these framework branches except one or two on each. The next year shorten in the new growth about half. Keep this method of pruning until the fifth year, allowing enough branches to properly shade the trunk, which is quite essential with the Cherry. After that severe pruning is not so essential, yet it must be done enough to promote fruit-spurs the length of every limb.

All varieties listed are quite hardy except the sweets which, however, do quite well here in the Yakima Valley and similar locations. The others are hardy anywhere.

BING. Very large; blackish purple. Very solid and of highest quality. The standard market and shipping variety. Sweet.

Black Republican. Fruit very large; shining black. Firm and good. Sweet.

Black Tartarian. Very large; purplish black; juicy and fine. Sweet.

Centennial. Seedling of Royal Ann. Larger. Sweet and good.

***Early Richmond.** Medium size; dark red when fully ripe. Very juicy and acid. Known as the "Pie Cherry."

***English Morello.** Medium size; dark red; juicy, acid.

LAMBERT. Largest, richest, blackest Cherry known. Extra good. Flesh very firm, dark red and rich. Sweet.

***Late Duke.** Large; light red; late and fine.

***May Duke.** Large; very early; semi-sweet. Juicy and fine. Ripens here about June 15.

***MONTMORENCY, LARGE.** Large; red; early; juicy, acid. Very fine. In great demand by the canneries who will contract at high prices for a term of years.

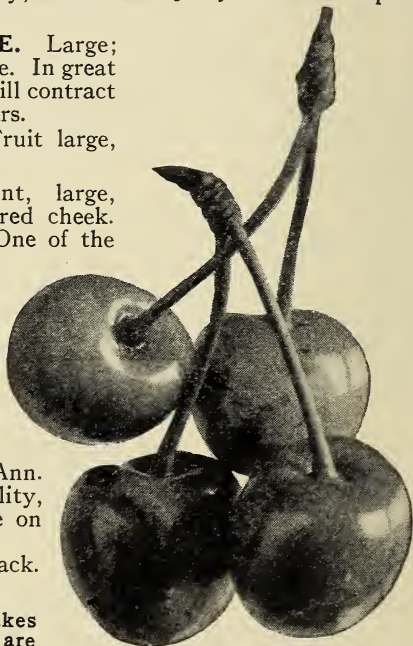
***Ostheime.** Very hardy. Fruit large, dark red. Acid.

ROYAL ANN. Magnificent, large, pale yellow fruit, with bright red cheek. Flesh firm, juicy, and sweet. One of the best.

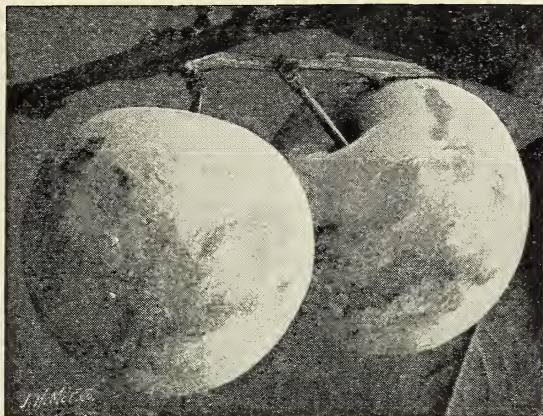
Waterhouse. In general the Waterhouse resembles the Royal Ann, but is slightly smaller and has a long stem. Same color and practically the same shape. Ripening period the same. Has proven to be the best pollenizer for either Bing, Lambert, or Royal Ann. Heavy bearer and good quality, bringing practically same price on market as Royal Ann.

Windsor. Large; purplish black. Hardy.

Varieties starred (*) are the Dukes and Morellos, or acid sorts, and are perfectly hardy anywhere.



Bing Cherries



Maynard Plums

Plums

Plums have not been planted as extensively as they deserve. They are excellent to fill out the list of varieties for home use and are hardy, abundant bearers and quite free from disease. The Japanese type of Plums are highly flavored and are rapidly winning favor. Not as hardy as the American types, but most of them thrive where peaches grow.

Pruning. Same general rule as for cherries.

Abundance. One of the best of the Japanese types. Rapid grower; healthy; medium size; rich, bright cherry red; fruit very large and good.

Burbank. Vigorous grower; very large; yellowish ground with red cheek.

Damson. Small; oval; purple; rather tart. In demand by canneries.

Diamond. Wonderful grower; heavy, regular producer; large; oblong; dark, purplish red. Good shipper.

Grand Duke. Extra large; heavy and early bearer. Dark purple; flesh greenish yellow, juicy, firm and sweet. Plant as a pollenizer for Tragedy.

Green Gage. Small; extra good. Very hardy.

Kelsey. Japanese. Very large; rich reddish purple on yellow ground. Tree a prolific and early bearer; very largely planted for shipping East. The largest of all Plums.

MAYNARD. One of the very best of Burbank's introductions. Very large; nearly round; rich crimson-purple. Tree hardy, vigorous, and productive. Flesh firm, even when dead ripe, but melting and juicy. Extra good.

Moore's Arctic. Very hardy; abundant bearer; bluish purple.

Peach. Very large and handsome; red; fine quality.

Red June. Japan type. Medium size; deep red. Flesh light lemon-yellow. Very good.

Reine Claude. Large; greenish yellow; juicy; sweet.

Satsuma. Japanese Blood Plum. Red flesh; small stone. Good.

Wickson. Sturdy, upright grower; very productive; deep red. Flesh firm, sugary, and fine.

Yellow Egg. Very large; hardy and productive.

Prunes

To such proportions has the Prune industry grown in recent years that Prunes are now classed as one of the most important crops on the Pacific Coast. Along the Coast, in the rain-belt, they are raised for drying, but in the interior they are shipped fresh, commanding high prices and returning to orchardists more net money per acre than almost any other fruit.



Italian prune orchard in bloom giving promise of an abundant harvest.
This is a very profitable variety in the Northwest

PRUNES, continued

FRENCH (Petite). D. The small, sweet Prune, so extensively planted in California for drying purposes. Juicy, sugary, rich, and sweet. Immense bearer.

HUNGARIAN (Pond's Seedling Plum). D. Very large; dark red. Juicy, sweet. Fine shipping variety and heavy bearer.

Imperial Epineuse. D. Large; light purple; thick skin; sweet and of high flavor. Highly esteemed in California. Always commands the highest market prices.

ITALIAN. The Prune of commerce here in the Northwest. Planted extensively for drying or shipping green. Medium; oval; purple; juicy, sweet and delicious. Heavy and regular bearer.

Liberty (German). D. Large; long; oval; dark purple. Good.

Silver. D. Very large; late; productive. Good.

STANDARD. Recent Burbank introduction. Without doubt best fresh shipping Prune grown. Larger than Italian, but with smaller stone. Unusually good shipper. Excellent flavor. Blooms with Italian and ripens with Tragedy, making it safe from spring frosts and very profitable as an early market variety. Produces a heavy crop each year.

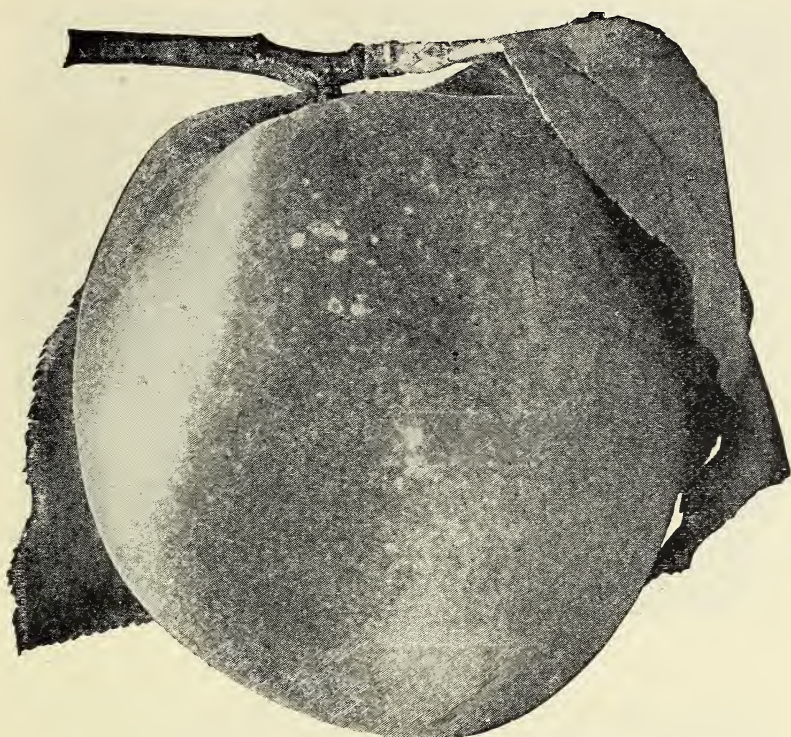
SUGAR. Burbank introduction. Ripens month earlier than French. Almost one-fourth sugar. Very heavy drier. Extra good. Fine shipper and very productive.

Tragedy. Very early; medium size; dark purple. Flesh yellowish green, very rich and good. For early districts this is a valuable shipping variety.

When to Pick Plums and Prunes in the Yakima Valley

The following tabulations, taken from Lowther's "Encyclopedia of Practical Horticulture," and other reliable sources, is, of course, general, as seasons vary, but the dates may be considered approximately correct. The period of ripening is for Yakima and the upper valley.

Abundance	Aug. 9
Burbank	Aug. 23
Damson	Aug. 31
French (Petite)	Aug. 30 to Sept. 12
Green Gage	Aug. 17 to Sept. 12
Hungarian	Aug. 17 to Sept. 12
Italian Prune	Aug. 26 to Sept. 12
Peach Plum	July 20 to Aug. 3
Red June	July 20
Silver Prune	Aug. 19 to Sept. 12
Standard Prune	Aug. 5 to 10
Tragedy Prune	Aug. 3 to 9
Yellow Egg	Aug. 23



Elberta Peach

Peaches

One of the most luscious of all fruits, ripening over a long season, and adapted to a wide range of territory. Peaches are all borne on wood of the previous season's growth, and this makes it absolutely necessary to prune the trees early, to remove dead branches, to let in light and air, and to keep the trees in good shape to produce bearing wood. In pruning the Peach keep in mind its tendency to produce only on the upper branches and try to overcome that by distributing fruit-spurs the length of the limbs. Prune very severely the first year, cutting back about one-third, distributing the laterals along the entire length of the branches about 6 or 8 inches apart and shortened to promote bearing. F. denotes freestones, S-C., semi-cling, and C., clingstones.

Admiral Dewey (Triumph). F. Deep orange-yellow, with red cheek. Flesh clear yellow. Very early.

Alexander. C. Very early; medium size; greenish white.

Bokhara. F. Russian variety. Extremely hardy; beautiful yellow, red cheek. Good.

Carman. F. Very large; creamy white; early; productive.

Champion. F. Hardy; large; creamy white, with red cheek. Flavor exquisite. Very good.

CRAWFORD'S EARLY. F. Large; yellow; excellent. Standard early Peach. Productive.

Crawford's Late. F. Large; vigorous grower; productive; yellow; extra good late variety.

Crosby. F. An iron-clad Peach; medium size; orange-yellow; sweet; very good.

ELBERTA. F. Extra large; bright yellow; flesh yellow, juicy, sweet. Fruit very showy. One of the best market varieties. Grown more than any other Peach in the Northwest.

Everbearing. F. Ripens over period of several weeks. Creamy white, red veins; juicy.



J. H. Hale Peaches

PEACHES, continued

Foster. F. Large; deep orange-red; early; very good.

Hale's Early. S-C. Medium size; greenish white; good.

J. H. Hale. F. One of the best Peaches introduced in recent years. Yellow; very large; quality unusually good. Very firm, making it an excellent shipper. Colors about ten days before ripening, thus enabling one to put it on the market looking at its best, yet firm enough to hold up well. Best shipping Peach known. Excellent home canner. During summer 1920, following the 30° below zero weather December, 1919, the J. H. Hale bore heavier and was less affected by the cold than any other variety in the Yakima Valley.

Muir (Malta). F. Large; pale yellow. Best for drying.

Perfection. F. Very large; yellow; hardy; late.

PHILLIPS' CLING. C. Very large; yellow. Extra good for commercial canning. Late.

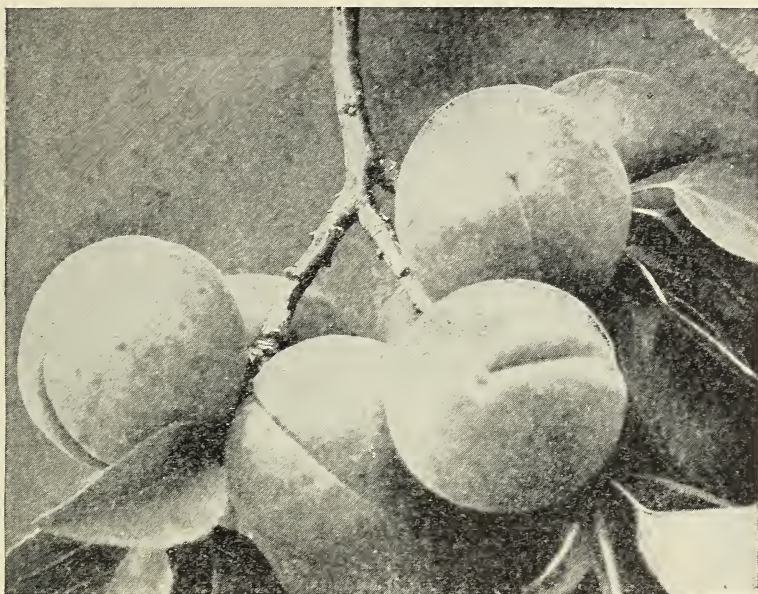
Salway. F. Very large; deep yellow; excellent flavor; fine for home canning. Late.

SLAPPY. F. Large; rich, deep yellow; very firm; productive; good shipper; fine for home canning. Early.

TUSCAN CLING. C. Very large; yellow. Much sought by commercial canners. Extra good; rich. Earliest cling.

Average Dates for Picking Peaches in Yakima Valley

Admiral Dewey	July 24 to Aug. 10
Alexander	July 16 to Aug. 16
Carman	July 30 to Aug. 28
Champion	Aug. 6 to 30
Crosby	Aug. 26
Crawford's Early	Aug. 9 to Sept. 9
Crawford's Late	Aug. 23
Elberta	Aug. 18 to Sept. 28
Foster	Aug. 18
Hale's Early	July 16 to Aug. 16
J. H. Hale	Aug. 13
Perfection	Aug. 28
Phillip's Cling	Sept. 5
Salway	Sept. 20
Slappy	Aug. 6 to 28
Tuscan Cling	Aug. 10



Moorpark Wenatchee Apricots

Apricots

Beautiful and delicious. As hardy as the peach, and should be in every home orchard. The Blenheim and Tilton are the two best varieties for the home and commercial canning, while the Wenatchee Moorpark, and Tilton are the best for shipping fresh. The Apricot is a rapid grower and an early and heavy bearer. It grows to perfection in the Wenatchee and Yakima Valleys and around The Dalles, Ore.

Pruning. Because so many are not familiar with the Apricot, we give below pruning instructions of Prof. E. J. Wickson, Professor of Horticulture of the University of California. He says:

"The Apricot tree bears upon old spurs, like the plum; also upon the new wood, like the peach. This fact has to be borne in mind when winter thinning of the new growth is undertaken. When planting, cut back to 18 inches from the ground, trimming off all branches and leaving a single stem. The tree will throw out shoots vigorously, and frequently two or three shoots from one point. These shoots should be thinned out, leaving no more than four or five, no two of which should come from one point, nor be directly opposite. The first shoot should start 12 inches from the ground, the others in such a manner as to divide the space and make the branches balance, leaving the top shoot to form the central part of the tree. It will be necessary to go over the trees several times the first year to remove shoots that may start where not wanted. The second year cut back the first season's growth to within 5 to 10 inches of the body of the tree, and all forks should be cut out, even if it necessitates forming a new head, as it is much better to lose some growth on a young tree than to take the risk of splitting down when the tree begins to bear fruit. The second year will require much more attention than the first year, in order to keep off suckers and all lateral growth that may start on the under side of the new limbs. In pruning for the third year the second year's growth should now be cut back to within 15 to 20 inches of the old wood, except the central stem, which may be left 24 to 30 inches long, depending on the number of laterals it may have thrown out. During the third season's growth go over the trees about three times before July to remove suckers and lateral growth that may start on the lower side of limbs. The only pruning necessary the following year will be to take out any cross limbs and sprouts that may have been overlooked the previous summer."

Thinning. The Apricot tends to overbear, consequently, though hand thinning is an expensive operation, the free-fruited varieties must be vigorously thinned if they are to be profitable.

Alexis. Very hardy; immense bearer; fruit large; flecked with red; sweet and delicious. July.

Fruit and Ornamental Trees for the Northwest

APRICOTS, continued

BLLENHEIM. Large; oval; flesh full to the pit, yellow, rich and juicy; ripens evenly and soon after the Royal. Regular and prolific bearer; good shipping, drying and canning variety.

MOORPARK, WENATCHEE. An improvement over regular Moorpark. Very large; beautiful yellow. Ripens before the Alexander peach. Blooms eight or ten days earlier than peaches. Extra-good quality; splendid shipper. Begins bearing at three years of age.

Royal. Large; oval, slightly compressed; yellow, with orange cheek faintly tinged with red; flesh pale orange, firm and juicy; very productive.

TILTON. Medium size. Excellent flavor. On account of ripening its crop at one time, and its rich color and heavy productiveness, it is very profitable. Very often sets a crop the second year. One of the best for canning, drying, or shipping. Very hardy. Has borne fruit when other Cots and peaches were frozen and the blossoms killed.

Average Dates for Picking Apricots in Yakima Valley

Blenheim	July 23
Moorpark, Wenatchee	July 12
Royal	July 15 to Aug. 3
Tilton	July 24 to July 30

Nectarines

A most delicious, smooth-skinned fruit, which thrives wherever peaches will grow. Excellent for preserves or eating raw. Every home orchard should have a few trees. The Nectarine is practically the same as the peach, so the same cultural and pruning directions will apply.

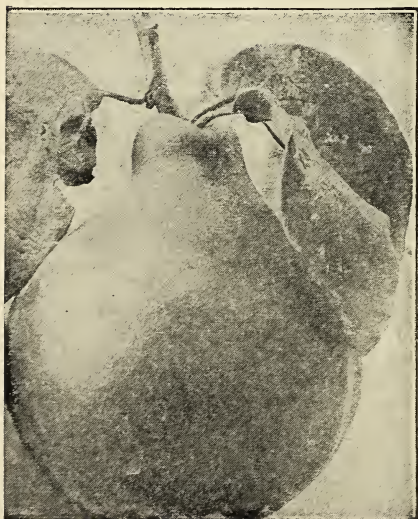
Boston. Large; handsome; deep yellow with a bright blush. Flesh yellow; sweet.

Lord Napier. Large; cream color; dark red cheek. July.

New White. Large; white; tender; very juicy. August.

Quinces

Quinces are of late attracting a great deal of attention as a market fruit. They always command a good price in the markets, and, as they



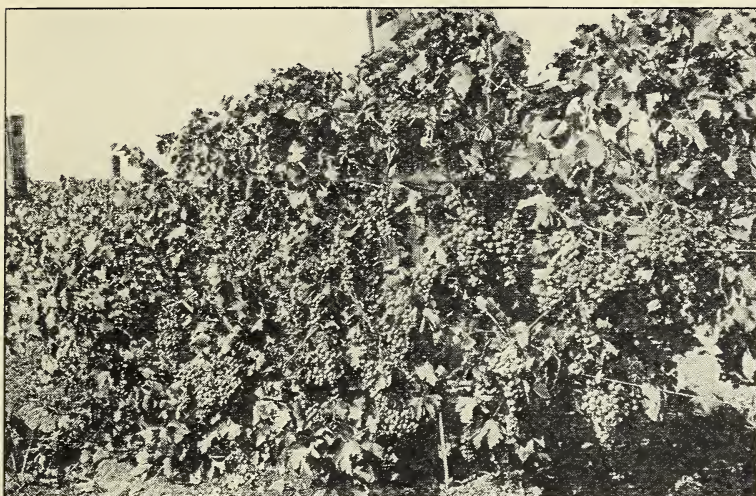
Champion Quince

yield abundantly, are a very profitable tree to plant. Especially desirable for jellies or preserves. A certain kind of blight attacks Quince trees, which, if left alone, will kill them, but this can be controlled by cutting away the diseased portions. Don't fail to have at least one or two Quince trees in the home orchard.

Champion. Very large; cooks as tender as an apple.

Orange (Apple). Large; bright golden yellow. Good.

PINEAPPLE. Originated by Luther Burbank. The name comes from the flavor which is suggestive of the pineapple. Excellent whether eaten raw or cooked.



Concord Grape

Small Fruits

Small fruits, rhubarb, asparagus, etc., are so easily grown and require so little room that no home should be without a sufficiency for table and canning use. On the farm one usually has ground to plant enough for home use and some to sell, but in the cities the average home-owner is too often apt to overlook the possibilities of back-yard gardening, thereby missing the joys of growing and eating fruit fresh picked, than which there is none better, and there is usually a ready market for all the surplus fruit.

Both farmer and fruit-grower should plant liberally of small fruits to bring in "early money." The fruit canneries are anxious to contract for all the fruit that can be grown in their vicinity. In small fruits the first to ripen is the Gooseberry, next Strawberry, then Red Raspberry, Loganberry, Currant, and Blackberries, all of which are profitable. The possibilities here should not be overlooked.

Grapes

Grapes are the most beautiful of all fruits and are most highly esteemed for many uses. They can be grown by any one who has even so little as a square foot of ground and a wall. Confined to a stake, bound to a trellis, trained over an arbor, or extended until the vines cover a large tree or building, they yield their graceful clusters and luscious, blooming bunches of fruit and give extraordinary results. No other woody fruit, not even the apple, can be grown in so extensive a territory, upon such a variety of soils, begin to bear so soon, and continue for so many years, or supply fresh fruit for so long a season in such a wealth of colors and flavors, or whose surplus can be handled in such a variety of ways. Don't delay but plant this year and have plenty of fruit next year. The American varieties are hardy practically everywhere, but the European varieties are tender, and here in the North can only be grown in certain parts of the Wenatchee and Yakima Valleys and along the Columbia River.

Distance. In setting out vines, the character and strength of the soil is an important point to be considered. Eight by 8 feet is a popular distance.

Soils. Good Grapes may be grown on any soil—sandy, clay, loamy, etc., that is not too shallow or too filled with alkali. The soil must be well drained. Hillsides unsuitable for other crops are good places for Grapes.

Pruning. Annual and careful pruning is essential to the production of good Grapes. The pruning should be done between November and

Fruit and Ornamental Trees for the Northwest

GRAPES, continued

March, while the vines are entirely dormant, to avoid excessive bleeding. During the first season only one or two of the strongest shoots should be allowed to grow. These should be tied to stakes about 6 feet long above the ground. The following winter cut off all shoots but the best and cut it back leaving only two buds. This causes all the energy of the plant to go into the few shoots that develop from these buds. At the beginning of the second year cut back to one shoot, or two, if the vine is a vigorous grower. Each succeeding year cut back vigorously, shortening in the shoots, leaving a few buds on each.

American Varieties (Hardy)

Brighton. Red. Ripens earlier than Delaware. Rich, sweet, fine quality. Hardy.

CAMPBELL'S EARLY. Black. Strong, hardy, vigorous growth; thick, heavy, perfectly healthy foliage. Large; glossy black, with a beautiful blue bloom; sweet and juicy; seeds small. Good keeper. Extra-good quality. Ripens a week before Concord.

CONCORD. Black. The standard of excellence. Probably the most popular Grape grown. Large; handsome; very hardy and productive.

Delaware. Red. Bunches small, compact; berries small, round; skin thin, light red; flesh very juicy, exceedingly sweet, spicy.

Moore's Diamond. White. Juicy, sweet; excellent; vigorous grower; prolific. Ripens two weeks before Concord.

Moore's Early. Black. One of the best early black varieties. Exceedingly hardy; ripens about two weeks before Concord.

Niagara. White. Very vigorous and very prolific; bunches large; berries large. Quality much like Concord.

WORDEN. Black. Seedling of Concord and very similar to it, but larger and about ten days earlier.

Foreign Varieties (Tender)

Black Hamburg. A fine, tender Grape, producing large, magnificent, compact bunches. Grapes large and oblong. A great favorite as a table Grape because of the splendid flavor and good appearance.

Flame Tokay. Red. Bunches very large; berries large; skin thick, meaty. Very good.



Malaga. White. Strong grower; very large; oval; yellowish green. Immensely productive; one of the best shipping Grapes.

Muscat. White. Bunches long; berry oval; skin thick; decided Muscat flavor.

Thompson's Seedless. White. Small; very sweet and seedless. Fine for drying.

Write us if you are in doubt about the fruits best suited for your place.

Grapes are profitable fruits for small gardens

Blackberries

Too many have neglected the Blackberry on account of its thorny habit of growth, and but few realize the profit to be derived from planting it. In recent years the canneries have been unable to get enough Blackberries to fill their orders and consequently have paid high prices for wild Blackberries, the waste land along the Coast containing these berries often paying more per acre than cultivated farms. Train on trellises and you will be surprised at the amount of fruit you can get from a few vines. Try mixing Blackberries, Blackcap Raspberries, and Loganberries and making jelly. You'll never forget the delicious flavor.



Blowers Blackberries

Distance. Plant in rows 6 feet apart, with plants 4 feet apart in the rows; for market use, in rows 8 feet apart, with plants 3 feet apart in the rows.

The following varieties are first-class. Not a poor one in the lot.

BLOWERS. Nearly everbearing. Hardy; large; an immense bearer; extra good.

Evergreen. Native of the Coast. Large; sweet, rich, and delicious.

Himalaya Giant. Vigorous grower, canes sometimes reaching 30 to 40 feet; large; rich; very prolific.

Mammoth. Rampant, trailing on the ground. Enormously productive and exceedingly early. Fruit large.

Mercereau. Exceedingly hardy. Large; productive. Very fine.

LOGAN HYBRID. Excellent for home-gardens as well as for market. No one needs be told of the wonderful progress the Logan has been making in the last few years in the Willamette Valley and in other sections west of the Cascades. Thought to be a cross between the Auginbaugh Blackberry and Red Raspberry. Trails on the ground like a dewberry. Canes very large, without the thorns of the blackberry, but have very fine spines. Strong grower and enormous bearer. Fruit very large, dark red when fully ripe. Excellent for jelly, juice, or jam. Comparatively free from seeds. Ripens early, before other berries become plentiful.

BURBANK'S THORNLESS. Medium early to late, jet black, hardy, good size, round; bears in large clusters over a long season. Rampant grower, heavy yielder, fine flavor, sweet and luscious. Good shipper.

CORY'S THORNLESS MAMMOTH. Evidently a sprout from common Mammoth. Foliage and habit identical with Mammoth. Occasionally a single branch will have a few soft spines, but none whatever to bother in gathering. Fruit immense, long and large, better flavor than Mammoth. Hardy anywhere. Very small soft seeds. Season early.

Special Care for Thornless. Train on wires same as hardy grapes, using four of the strongest vines from each plant. Prune back annually same as grapes. Do not allow any suckers or sprouts to accumulate at base of plant. Plant 5 feet apart in rows which are about 6 feet apart.



St. Regis Raspberries

Dewberries

Dewberries are of unusually fine flavor, but the berries are seldom firm enough for long shipment. However, for home use and nearby market, they are much prized. It is one of the most luscious of the small fruits and rapidly growing in popularity.

Austin's Improved. Exceedingly productive. Glossy, shining black; flavor very fine. Hardy.

LUCRETIA. Low-growing, trailing habit of growth; very large; hardy, healthy and fine.

Raspberries

One of the most popular of all cane fruits. Easily grown, productive, and thriving over a wide range of territory, they should be in every garden. One can have the red, black, purple, and yellow varieties, giving a variety of flavors to meet every taste. While the red Raspberries "sucker" or come up from the roots and are inclined to "take the place" if left alone, yet it is not much trouble to keep the new growth hoed or cut off when it shows up through the ground. The canneries are unable to meet the supply for Raspberries for jam and other uses, and in sections like the Puyallup Valley in western Washington the industry has become a highly specialized and profitable one.

Plant in good soil and manure from time to time freely. The hills should not be less than 4 feet apart each way with two or three canes in a hill. Cut out the old and weak shoots each year, preserving not over six for fruiting.

Columbian. Dark reddish purple. Firm; very hardy and wonderfully prolific.

Cumberland. Black. Enormous in size, far surpassing any other sort; very firm. Good quality and a splendid shipper. Midseason. Bush healthy and vigorous.

CUTHBERT. Red. The standard market sort. Large; conical; deep, rich crimson; excellent quality. Vigorous grower; entirely hardy and immensely productive.

Golden Queen. Yellow. Seedling of Cuthbert but color of the fruit is a rich golden yellow. Flavor of highest quality; excellent in every way. Hardy and productive.

Gregg. Black. Good size; fine quality; very productive and hardy. Thrives exceptionally well east of Cascades.

Fruit and Ornamental Trees for the Northwest

RASPBERRIES, continued

Herbert. Red. A new variety of great merit. Berries large, finely flavored.

Munger. Black. Very large; tough in texture, making it a good shipper. Dries well. Better than any other black-cap for the Willamette Valley and west coast of Oregon and Washington.

ST. REGIS. Red. Everbearing. One of the most wonderful Raspberries ever introduced. Bears the first year planted and after the main crop is picked another crop begins to ripen in a few weeks, continuing until as late as the first of November in the Yakima Valley. Berry of fine flavor and good texture, making it a fine shipper; very productive and strictly first-class in every way. Does better if it receives plenty of water when berries are ripening.

Currants

Currants and gooseberries do better if grown where there is partial shade. This can be provided by planting where there are fruit trees, along the north side of a hedge, or the north side of a building or fence. A half-dozen bushes will provide enough fruit for the ordinary family. They are easy to raise and as everyone likes Currant jelly and plenty of it, they should be found in every garden. By careful tillage and care, red varieties should yield six quarts to the bush and the black varieties four or five quarts each.

Soil. The soil must be rich, for Currants are heavy feeders.

Distance. Plant 4 feet apart each way.

Pruning. After the bush is three or four years old, cut away all wood except the previous season's growth.

The varieties listed below have proven highly satisfactory for north-western conditions.

Black Naples. Large; productive. One of the best black Currants.

CHERRY. Red. Large; deep red; rather acid; very productive; excellent.

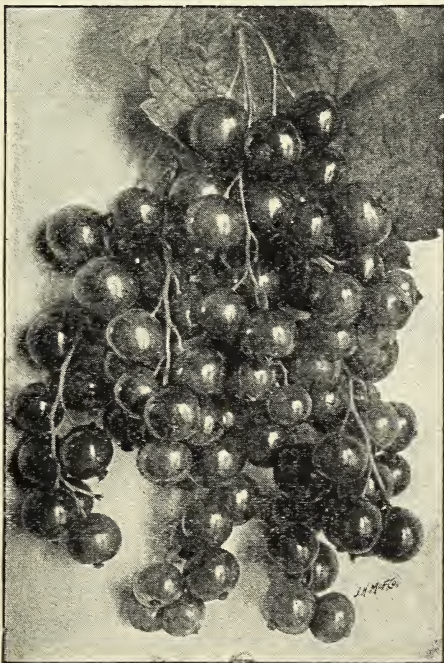
FAY'S PROLIFIC. Red. Cross between Cherry and Victoria. Very large; fine flavor.

PERFECTION. Finest and largest Currant known. Large berries on long stem, making it possible to pick without crushing. Fine flavor and first-class in every way. Very productive.

White Grape. Very large; yellowish white; sweet and productive.

Gooseberries

A very profitable fruit not fully appreciated by the buying public because it is often picked too green. It returns from \$300 to \$500 per acre under favorable conditions. The Gooseberry stands in a class by itself. Early, hardy, a good and unfailing bearer, and an excellent



Perfection Currants



Peace and plenty are suggested by this beautiful panorama in the Yakima Valley. Our trees were planted on farms shown here and contributed in

GOOSEBERRIES, continued

shipper, it always commands a sure and profitable market. As a family fruit the Gooseberry has special claims. It is easy to grow anywhere, except in warm climates, and is wonderfully hardy. With ordinary good care it will yield annually for ten or fifteen years. It is highly productive, a well-grown, well-managed bush, yielding four to eight quarts. Don't make the mistake of picking too green, but allow to partially ripen. They require less sugar and are better flavored. Plant in a shady place.

Pruning. The best method so far recommended is to allow two, or not more than three young shoots to remain each spring, and to cut out stems that after four or five years of bearing show signs of failing. This method insures the growth on new bearing wood.

Copeland. A new variety. Wonderfully large; size of small plums; heavy bearer.

Downing. American variety. Hardy; light green; productive and large.

Josslyn (Red Jacket). Large; light red; prolific; very fine.

OREGON CHAMPION. Free from mildew; large and fine. Best variety for Northwest.

Pearl. Very hardy; productive; berries medium size.

Strawberries

Does anyone need to be told about Strawberries? In home-gardens there may be berries from June until first frost in the fall if one will plant the everbearing varieties with the other kinds. While the everbearers are meritorious and taste mighty good in the fall, yet during the



No other branch of agriculture offers such profits as fruit-growing. Thousands of no small measure to the success of these up-to-date fruit-growers

STRAWBERRIES, continued

regular season they are not quite as highly flavored as the standard sorts, such as Clark's Seedling, Admiral Dewey, and others, so plant some of each. Canneries offer high prices for the fruit for jam and preserves.

ADMIRAL DEWEY. Large; very firm; good shipper. Beautiful dark red; flesh red to center; abundant bearer, following Clark's Seedling. Slightly sweeter than Clark's Seedling. Unexcelled for canning. Nearly everbearing.

CLARK'S SEEDLING (Hood River). Large; very firm; beautiful dark red; symmetrical and unsurpassed in quality. Best shipping variety known and a very profitable variety for east of the mountains; not so profitable west of Cascades. While it does not yield so abundantly as Marshall and some others, yet it brings a higher price on the market, making it the most profitable berry to grow for shipping.

Magoon. Very heavy yielder; hardy; fine flavored and thrives exceptionally well on the Coast.

Marshall. The berry sought after by the canneries because it is such an abundant and heavy bearer and makes up so well into jams and preserves. Its heavy-yielding qualities make it a profitable berry to plant if one wishes to sell to the canneries.

SUPERB EVERBEARING. Bears first season planted and two or three weeks after main or regular crop is off it starts bearing again and continues until frost. Berries large and of good quality, being better in the autumn. Should be in every garden.

PROGRESSIVE EVERBEARING. In habit like the Superb. Berries not as large and a trifle sweeter.



Columbian Mammoth White
Asparagus

Asparagus

Earliest and finest of spring vegetables. Among the easiest cultivated and most profitable. It is hardy and does not require replanting, but yields heavier each succeeding year.

Cultivation. See that the ground is well drained, naturally or otherwise. Work it up fine and deep and make it very rich with well-rotted barnyard manure. Locate the plants 8 inches apart, in rows 3 feet apart. Spread out the roots in a trench made deep enough to permit their crowns to be covered with 3 or 4 inches of mellow earth. Give the bed liberal dressings of manure at intervals, and, except near the seashore, three pounds of salt per square yard early every spring. Do not cut for use until the plants have been growing two seasons.

Columbian Mammoth White. Produces shoots which are white and remain so as long as it is fit for use. In addition to the marvelous advantage of its white color, it is even more robust and vigorous in habit, and grows larger shoots and fully as many of them as Conover's Colossal.

Palmetto. A very early variety. Even, regular size; of excellent quality.

Washington. This is the first result of a plant-breeding campaign for the eradication of Asparagus rust. The work was begun in 1906 by the U. S. Department of Agriculture, associated with the Massachusetts Experiment Station. Washington Asparagus is, as far as possible, an extremely resistant, vigorous, and high-yielding strain of giant Asparagus. It is rapid growing, which indicates tenderness, very uniform in size, and excellent.

Horse-Radish

An esculent root used dried, grated, and canned, or in other ways preserved and used as a flavoring agent on meats, in vinegars, etc. Horse-Radish requires a good soil prepared in about the same manner as for corn or potatoes. The plants withstand considerable drought and are practically frostproof. In fact, frost even adds to their flavor. Ready to use by November 1.

Rhubarb

The great value of Rhubarb has always been its earliness. Excellent as a spring tonic, it also has a delicious flavor, making it highly desirable. The Rhubarb is a gross feeder, and it is almost impossible to make the ground too rich. The richer it is the faster will be the growth and the tenderer the stalks.

WAGNER'S GIANT CRIMSON WINTER. Wonderfully large and very productive. Beautiful red stem, cooks tender, not stringy and with an excellent flavor.

Dodge's Prolific. Very large; stalks often 3 to 4 feet high; tender and fine.

Victoria. Very large; hardy and valuable; early.

Nut Trees

Recent years have witnessed a remarkable development in the planting of nut-bearing trees. In many cases they can be grown on what is normally waste land on the farm, and many times land so planted has proven to be the most productive and profitable on the place. Select nut trees which do well in your locality. They will begin bearing almost before you are aware of it. They make excellent shade as well as bring in a profitable return, so are a dual-purpose tree. Plant a few nut trees this year. Let your shade trees pay your taxes.

Almonds

Almonds require a light, warm soil.

JORDAN. Hardy. Thrives and does well in the Yakima Valley. Nut very long, narrow but plump. Heavy yielder; quality fine.

Butternut; White Walnut

Native in the eastern states. The cultivation of this variety has been neglected here. It is a beautiful growing tree and yields large nuts with rough, hard shells, and full, white, oily kernels, sweet, rich, and of delicate flavor. This variety does well in the coast counties and in well-watered regions of the foothills. Not suited to the dry, hot places.

Chestnuts

American Sweet (*Castanea americana*). The fruit of this variety is smaller than the European kinds, but is very sweet and well flavored; highly esteemed in the eastern states. Does well in central Washington.

Filberts

Of the easiest culture, growing 6 to 16 feet high; hardy and one of the best and most profitable nuts. Rapidly assuming a commercial importance west of the Cascades. While much of the work is still in the experimental stage, yet enough is now known that we feel safe in recommending the following two varieties as the best so far found for general northwestern conditions. Best results are secured if they are planted together so as to cross pollenize.

Barcelona. Round; heavy bearer; large.

Du Chilly. Long, thin-shelled nut; very large.

Walnuts

The English or Persian Walnut, the nut of commerce, is planted largely on the Pacific Coast, one 1,600-acre orchard alone being planted in Oregon, besides many others only slightly smaller.

Vrooman Franquette. This pure strain is recognized as being the best variety for the Northwest on account of its late blooming, self-pollenizing, and perfect sealing qualities. The shell is full of rich meat, is perfectly sealed, and the nuts command the highest market price. Trees of this variety are doing splendidly here in the Yakima Valley, but with our present knowledge we would not recommend them for sections colder than this.

American Black. Makes a most beautiful shade tree, and the heavy crops of nuts sell readily, last winter bringing 15 cents per pound in our local markets. In localities where the English Walnut cannot be raised, all waste land or field borders should be planted to the Black Walnut.

California Black Walnut. Early bearer; rapid growth; nut hard but smooth, unlike American Black; rich and oily.

Japan (*Juglans Sieboldii*). Exceedingly hardy; vigorous but straggling grower. Nuts borne in clusters. Meat is sweet, flavor resembling pecans.



Shade and Ornamental Trees

Few people realize that by the use of a little time and money they may have attractive grounds and not only add to their own comfort, but greatly to the value of their property. How much more would you pay for a home in a setting of shade trees than for the same house set out in the glaring sun with no shade at all. A few years ago a certain man in the Palouse country lost the sale of his \$70,000 farm simply because he had no shade trees planted around the house and barn, and the would-be purchaser would not consider taking it because it lacked this inviting feature. \$25 expended in shade trees five years before would have been the means of selling that place. A few dollars spent in making a place more livable will bring back at least ten times that amount in added enjoyment and actual money returns in a few years if one should want to sell. We will be glad to help you select the trees you will need for your particular location and climate.

A sentimental value attaches to trees as they grow in dignity and beauty, and you will find them a splendid means of keeping the young folks on the farm. How much more inviting the home, nestling in a cool retreat under spreading branches, than the house that stands stark and bare on the landscape.

THE TREE

By Joyce Kilmer

(Who gave his life in France)

I think that I shall never see
A poem lovely as a tree.

A tree whose hungry mouth is prest
Against the earth's sweet flowing
breast.

A tree that looks at God all day
And lifts her leafy arms to pray;

A tree that may in summer wear
A nest of robins in her hair;

Upon whose bosom snow has lain;
Who intimately lives with rain.

Poems are made by fools like me,
But only God can make a tree.

Trees vary in their characteristics and are therefore useful for different purposes, and one should select a tree for the purpose intended. For instance, one would not line a street with the Cut-Leaf Weeping Birch, pretty as it is for single lawn planting.

Hints for Selecting Shade and Ornamental Trees

For Street or Border Planting

Maple, Norway
Maple, Sugar
Elm, American

Elm, English
Sycamore, European
(Oriental Plane)

Maple, Scarlet
Linden, American
Catalpa speciosa

For Ornamental and Specimen Planting

Catalpa Bungei
Crab, Bechtel's Double-flowering

Thorn, Red
Birch, Cut-Leaf Weeping

GENERAL LIST OF SHADE TREES

BALM OF GILEAD (*Populus candicans*; *P. ontariensis*). A native species of remarkably rapid growth.

BIRCH, European White (*Betula alba*). A fine, graceful tree, with spray-like branches. Moderate size, with silvery bark and slender branches.

BOX ELDER (Ash-leaved Maple; *Acer Negundo*). A fine, rapid-growing variety, with handsome, light green, pinnated foliage and spreading head; very hardy. Desirable for street planting and succeeds in many sections where other varieties do not thrive. Leaves come earlier than any other tree.

CATALPA Bungei (Umbrella Catalpa). Grafted on stems 6 to 8 feet high, it makes an umbrella-shaped top without pruning. Perfectly hardy and flourishes in almost all soils and climates. Leaves large, glossy, heart-shaped, deep green, like shingles on a roof; always make a symmetrical head. One of the most unique trees. Desirable for lawn, park, and cemetery planting.

speciosa. One of the most rapid-growers. Large, heart-shaped, downy leaves and compound panicles of white flowers, tinged with violet and dotted with purple and yellow. Very ornamental as a single specimen, but makes a good tree in large plantings.

CRAB, Bechtel's Double-flowering (*Pyrus malus floribunda*). Medium-sized ornamental tree of great beauty; perfectly hardy; succeeds well in all soils not extremely wet. When in bloom in early spring this tree is covered with perfectly double, small flowers resembling pink roses and deliciously fragrant. Does not bloom until the leaves are fully developed, which adds greatly to its beauty.

ELM, American (*Ulmus americana*). One of the choicest avenue trees available, forming a majestic vase-like specimen with graceful, arching branches. One of the grandest trees of our own American forests.

English (*U. campestris*). An erect, lofty tree, with rather small foliage of dark green which remains several weeks longer than that of the American Elm. A very majestic, imposing tree. Fine for avenue planting.



American Elm

FRINGE, Purple (*Rhus Cotinus*). A small tree or shrub much admired for its curious fringe- or hair-like flowers that cover its whole surface in midsummer.

White (*Chionanthus virginica*). A small native tree or shrub, with dark, glossy leaves and drooping racemes of pure white flowers, having narrow, fringe-like petals.

HORSE-CHESTNUT, Red-flowering (*Æsculus rubicunda*). Not so rapid or so fine a grower as the white; foliage deep green; blooms later, with showy red flowers.

White (*Æ. Hippocastanum*). A very beautiful, well-known tree, with round, dense head, dark green foliage, and, in early spring, an abundance of showy white flowers, slightly marked with red specks, in panicles.

Fruit and Ornamental Trees for the Northwest

SHADE AND ORNAMENTAL TREES, continued

LINDEN, American (*Basswood*; *Tilia americana*). A rapid-growing, beautiful, pyramidal native tree, with very large leaves and fragrant yellowish white flowers appearing in June, in drooping clusters of five to twenty blossoms.

European (*T. vulgaris*, *T. europæa*). Not quite so large as the American Linden, but of a beautiful pyramidal shape with large leaves and fragrant flowers. The leaves are deep green above, silvery beneath, the slightest breeze stirring them and showing the white lining of the foliage.

LOCUST, Black (*Robinia Pseudacacia*). Height 50 to 80 feet. Medium-sized tree, with feathery foliage and drooping racemes of very fragrant pea-shaped white flowers the middle of May.

Honey (*Gleditsia triacanthos*). A rapid-growing native tree, with powerful spines and delicate foliage, used especially for stock or field-hedges.

MAPLE, Norway (*Acer platanoides*). One of the most beautiful of all trees for street or avenue planting. Its large size, compact habit, broad, deep shining foliage, and stout, vigorous growth render it highly desirable. If given plenty of room it develops into a magnificent specimen. Attains a height of 70 to 100 feet.

Scarlet (*A. rubrum*). Height 50 to 100 feet. Branches spreading; deep red blossoms in early spring before the foliage; in autumn the leaves turn to brilliant shades of red and scarlet.



Norway Maple

Maples, Silver, or Soft (*A. dasycarpum*). A well-known native tree of rapid growth, large size, and irregular, rounded form. Foliage bright green above and silvery white beneath. Tree very hardy and easily transplanted. One of the most useful trees. We have a fine lot of them.

Sugar, or Rock (*A. saccharum*). Pyramidal form. Its upright habit of growth, dense foliage, and adaptability to different soils have rendered it one of the most extensively used. In autumn it

assumes rich tints of yellow and scarlet. Long-lived and highly desirable. Valuable for sugar.

Sycamore (*A. pseudoplatanus*). A noble European variety of rapid, spreading growth; broad, deep green foliage; a desirable shade tree.

MOUNTAIN ASH, European (*Pyrus aucuparia*). Similar in appearance to the American, with finer foliage and smaller, deeper colored berries. Much more desirable than the American and everywhere very popular. Erect stem; smooth bark; head dense and regular. Height 20 to 35 feet, when fully grown.

MULBERRY, Russian (*Morus tatarica*). A very hardy, rapid-growing tree of great value. Fruit of good size and produced in great abundance. Especially useful to plant near cherry trees, as it keeps the birds from destroying the crops on the fruit trees.

Fruit and Ornamental Trees for the Northwest

SHADE AND ORNAMENTAL TREES, continued

OAK, Red (*Quercus rubra*). Exceedingly beautiful, rapid-growing, majestic tree, forming a broad, round head 80 feet high. Foliage turns brilliant dark red in autumn. One of the very best sorts for street and ornamental planting.

POPLAR, Canadian (*Populus canadensis*). A very handsome, rapid-growing tree similar to the well-known Carolina Poplar, but of denser and lower branching habit of growth. Unusually hardy, thriving in the coldest sections of Montana, Wyoming, and eastern Alberta where many other kinds do not live. Dense foliage; large leaves of brilliant green.

Carolina (*P. carolinensis*). One of the most handsome and rapid-growing trees, with large, attractive, glossy, serrated, deep green leaves. Succeeds everywhere. Especially adapted for planting where quick shade is desired, but it should only be planted with other trees of a permanent type, with the idea of removing the Poplar in about eight or nine years when the other trees have attained sufficient size. Not altogether desirable for street or lawn planting as the roots clog up the sewers and extend long distances into the lawn just below the surface, upheaving it and sapping the moisture. It has its place, however, in the prairie sections and should be planted largely. Thrives under almost any condition, but responds readily to plenty of water.

Lombardy (*P. fastigiata*). A well-known, tall-growing tree of rapid growth and spire-like outline; very essential in landscaping to give variety of form and destroy the appearance of sameness produced by other trees of different height and habit of growth.

Silver (*P. alba*). A tree of wonderfully rapid growth and spreading habit; leaves large, dark, rich green above and white as snow beneath.

PRUNUS Pissardii (Purple-Leaf Plum). The leaves, as they first appear on the tips, are a beautiful orange color, and they mature to a rich purple, clear and distinct, growing darker as the season advances. Beautiful, shining bark; pink flowers and bright red fruit. Very hardy, rapid grower. Grows about 25 feet high.

triloba (Double-flowering Plum). A very desirable shrub or small tree introduced from Japan. Flowers semi-double, of delicate pink, upward of an inch in diameter, thickly set. Hardy; flowers in May.

SYCAMORE, American (Buttonwood; *Platanus occidentalis*). A well-known, tall, rapid-growing native tree; leaves large, heart-shaped at the base, lobes sharp-pointed.

European (Oriental Plane; *P. orientalis*). A lofty, wide-spreading tree; heart-shaped leaves, deeply cut; valuable for its handsome foliage and free growth; not so subject to disease as our native species. Excellent for street or avenue planting in Central Oregon, Washington, and Idaho.

THORN, Paul's Double Red (*Crataegus coccinea fl.-pl Paulii*). Flowers large, deep carmine-scarlet. Very beautiful ornamental tree, growing to about 30 feet.

Double White (*C. alba fl.-pl.*). Has small, double white flowers.

WILLOW, Golden (*Salix vitellina aurea*). A splendid grower, with light green leaves and golden yellow branches.



European Sycamore



Cut-leaved Birch

Weeping Deciduous Trees

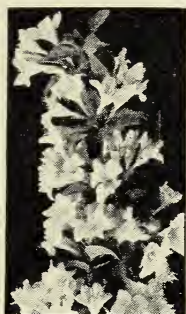
Much attention is now given to this class of trees, and we place them separately for the convenience of our patrons. The grace and beauty of the weeping varieties render them especially adapted to yard, lawn, or cemetery.

BIRCH, Cut-leaved (*Betula laciniata pendula*). Probably the most popular and desirable lawn tree in existence. Vigorous and perfectly hardy. Trunk straight, slender, and white as snow. Slim side branches droop in a most picturesque manner. Foliage delicate and deeply cut, coloring finely in the fall. The drooping branches and silvery bark form a most effective combination during the winter months, while the effect in the summer, with the long, gracefully drooping branches clothed with dainty leaves, is equally pleasing.

ELM, Camperdown (*Ulmus glabra Camperdownii*). Budded about 6 feet high on American Elm stock. Forms a dense, rounded head. Very beautiful. Leaves large, dark green, and glossy, covering the tree with a luxuriant mass of verdure.

WILLOW, Babylonian (*Salix babylonica*). The well-known common Weeping Willow. Exceedingly graceful and picturesque and easy to grow. Thrives well in any situation, but does particularly well along the banks of streams, where it adds a much-needed note to the landscape.

Flowering Deciduous Shrubs



NO home is complete without a proper setting of shrubs. They cover a wide range in flower and foliage, habit of growth, and season of blossoming. Use the larger ones for the background, working down to the smaller ones directly in front.

Do not spoil a lawn by planting single specimens or small groups in the center, but plant masses of shrubbery around the lawn or outer border of the place to give it a distinct outline. Instead of making a stiff formal line by planting all of one kind or height, make it wavy or irregular by putting little clumps of shrubbery here and there along the border, using as a center some tall shrub with distinct foliage.

"Tie" the house to the ground with a planting of shrubs around the foundation. This breaks the sharp angle caused by the house meeting the ground and makes it "nestle" or "melt" into its surroundings. For this purpose you will, of course, want the low-growing shrubs, unless your home rests on a very high foundation. In corners or where there are no windows, plant some of the higher shrubs, massing the lower ones in front. As a general rule the prevailing height of the shrubs around the rest of the house should be no higher than the bottom of the windows. In order, however, to avoid monotony, plant slightly higher shrubs between the windows.

For a splendid treatise on beautifying the home we suggest you write the U. S. Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 1087, "Beautifying the Farmstead."

The following list of shrubs comprises the best varieties adapted to our northwestern conditions. You will find all of the old standard sorts with which we are all familiar, also the desirable newer varieties.

Most persons interested in beautifying their grounds are naturally desirous of knowing which shrubs to use for certain places. To assist in selecting shrubs for various places, such as for backgrounds, foregrounds, etc., the following table has been compiled. Full descriptions of the various shrubs have already been given. The blooming season is also given so that by judicious selection one can have some bloom during the entire season from April to October.

If we can be of any assistance to you in planning your grounds, feel free to call upon us. We are prepared to offer definite suggestions that will help you plant your stock so as to get the maximum results.

Shrubs Attaining a Height of 6 to 8 Feet

Blue and Purple Flowers

Althæa. Purple	August, September
Lilac, Pres. Grevy. Blue	May
Lilac, Common. Purple	Early May
Lilac, Mme. Louis Spaeth. Purplish red	May

Pink Flowers

Althæa. Pink	August, September
Lilac, Belle de Nancy. Satiny pink	Early May

Red Flowers

Althæa. Red	August, September
Lilac, Senator Volland. Rosy red	Early May
Honeysuckle, Red Tartarian	Early May

White Flowers

Althæa. White	August, September
Honeysuckle, White Tartarian	Early May
Lilac, Frau Dammann	Early May
Lilac, Common. White	Early May
Snowball, Common, Japan, and Opulus	Early May
Syringa, Garland (Mock Orange)	June

Yellow Flowers

Forsythia suspensa (Drooping Golden Bell)	April
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Fruit and Ornamental Trees for the Northwest

Shrubs Attaining a Height of 5 to 6 Feet

Pink Flowers

Weigela, Rose-colored May, June

Red Flowers

Japan Quince. Beautiful blossoms March, April

White Flowers

Hydrangea paniculata grandiflora July, early September
Spiræa prunifolia Early May
Spiræa Vanhouttei May

Shrubs Attaining a Height of 4 to 5 Feet

Brown Flowers

Calycanthus floridus. Chocolate-colored flowers . . June

Pink Flowers

Almond, Double-flowering. Bright pink flowers . . Early May

White Flowers

Almond, Double-flowering. Pure white flowers . . Early May
Hydrangea arborescens (Hills of Snow). Pure
white flowers June to October
Spiræa Thunbergii. Pure white blooms Late April, early May
Syringa Lemoinei. Pure white blooms May, June

Shrubs Attaining a Height of 3 to 4 Feet

Pink Flowers

Weigela, Variegated-leaved. Bright pink flowers . . June

Red Flowers

Weigela hybrida, Eva Rathke. Bright red flowers . June

White Flowers

Deutzia Lemoinei. Pure white flowers May, June

Shrubs Attaining a Height of 1 to 3 Feet

Red Flowers

Spiræa Bumalda, Anthony Waterer. Magenta-red
to deep pink blooms July to September

White Flowers

Deutzia gracilis. Pure white blooms May, June
Spiræa callosa alba. White blooms July to September
Spiræa, Golden. White blooms June
Syringa, Golden. White blooms June

Shrubs Valuable for their Leaf or Bark Effects

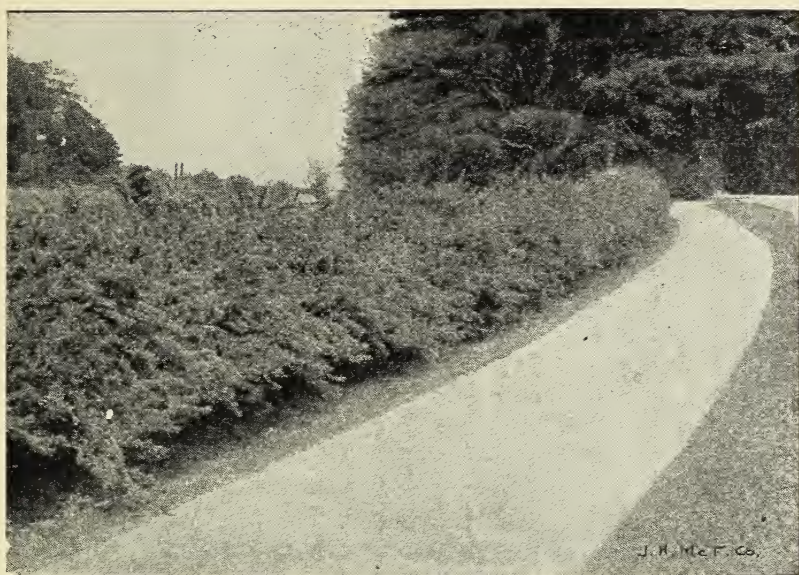
To brighten up a planting and add interest to it one should use the variegated-leaved shrubs sparingly. The following can be used to good advantage. The height is given so it can be fitted in with whatever group it belongs.

Barberry. Leaves turn to beautiful crimson in autumn, followed with bright red berries. 3 to 4 feet.

Dogwood. Variegated. Fine for backgrounds. Grows 10 to 12 feet high.

Syringa, Golden. Showy, yellow leaves. Grows to 3 to 4 feet high.

Spiræa, Golden. Grows 24 to 36 inches high.



Thunberg's Barberry

GENERAL LIST OF FLOWERING SHRUBS

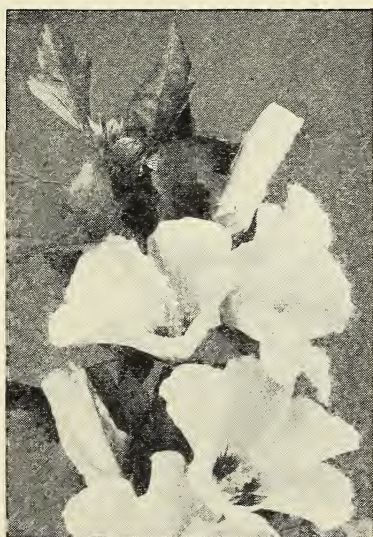
ALTHÆA (*Hibiscus syriacus*). Flowers large, close to branch, beautiful. Blooms very freely in August and September. Not altogether hardy where temperature gets below 10 degrees below zero. Can be furnished in Red, Pink, Purple, White, and Variegated-leaved. Ultimate height 6 to 8 feet.

ALMOND, Double Pink (*Prunus japonica rubra fl.-pl.*). A beautiful small shrub, bearing, in May, before the leaves appear, small double, rose-like flowers, closely set upon the twigs. Ultimate height 4 to 5 feet.

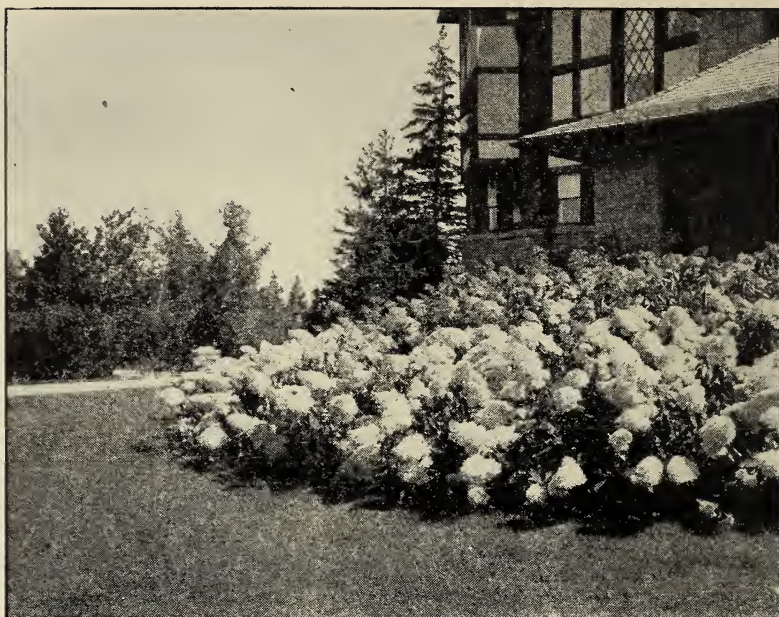
Double White (*P. japonica alba fl.-pl.*). Same as above except flowers are white.

BARBERRY, Thunberg's (*Berberis Thunbergii*). Not the Barberry which harbors the wheat rust, but a beautiful, small, compact shrub, somewhat thorny. Foliage small; bright red leaves in autumn and bright red berries all winter. Introduced from Japan. Highly desirable for use as hedge, and is an effective barrier to small animals, because of the fine spines which cover the branches. It is graceful when allowed to grow in its natural drooping form, but can be pruned to oval or flat form if desired. Ultimate height 3 to 4 feet.

CALYCANTHUS floridus (Sweet-scented Shrub). The wood is fragrant; foliage rich; flowers are of chocolate color, having a peculiarly agreeable odor. Blooms in June and at intervals afterward. Ultimate height 4 to 5 feet.



Althæa, or Rose of Sharon



Hydrangea paniculata grandiflora

FLOWERING DECIDUOUS SHRUBS continued

DEUTZIA gracilis. A very desirable dwarf-growing variety. Flowers pure white; blooms profusely in June. Excellent for massing in front of higher shrubs. Very hardy. A valuable plant for winter blooming indoors. Ultimate height 2 to 3 feet.

Lemoinei. Single; white. A hardy hybrid, partaking to a great extent of the character of *Gracilis*, but of a stronger growth. Good for forcing. Ultimate height 2 to 3 feet.

scabra, Pride of Rochester. A new variety, said to excel all others in size of the double white flowers, profusion of bloom, and vigorous habit of growing. Ultimate height 4 to 5 feet.

DOGWOOD, Variegated (*Cornus sanguinea variegata*). One of the finest variegated shrubs; of rapid growth. Leaves broadly margined with white; bark bright red in winter. Height 10 to 12 feet.

FORSYTHIA suspensa (Golden Bell). Drooping habit with yellow, pendulous flowers in early spring before its leaves appear. Ultimate height 6 to 7 feet.

HYDRANGEA paniculata grandiflora. This is one of the most valuable of our hardy shrubs. It attains a height of 5 to 6 feet and is perfectly hardy in all parts of the country. The flowers are white, borne in immense panicles nearly a foot long. It commences flowering in July and continues till the end of September or early October. Excellent for cemetery planting; valuable both for foliage and flowers, which are very durable.

arborescens grandiflora (Hills of Snow). This new American *Hydrangea* is believed to be the most beautiful hardy flowering shrub ever introduced. It blooms from early June till toward autumn frosts. The breadth is practically the same as the height, being from 4 to 5 feet, and it bears large, semi-circular, trusses of beautifully formed flowers of dazzling whiteness.

HONEYSUCKLE, Red Tartarian (*Lonicera tatarica rubra*). A beautiful flowering shrub; blooms early in May; flowers red and pink. Ultimate height 6 to 8 feet.

White Tartarian (*L. tatarica alba*). Similar to above except flowers are white. Ultimate height 6 to 8 feet.

Fruit and Ornamental Trees for the Northwest

FLOWERING DECIDUOUS SHRUBS, continued

LILAC, Common Purple (*Syringa vulgaris*). The well-known purple Lilac of our grandmothers' gardens. Free bloomer and very fragrant. Ultimate height 8 feet.

Common White (*S. vulgaris alba*). The same, only white bloom.

Persian (*S. persica*). Medium size with small leaves and bright purple flowers.

Belle de Nancy. (Double.) Very large, brilliant satiny rose, white toward center.

Frau Dammann. This produces the largest clusters of white Lilacs of the common species known in cultivation, also the purest white.

Mme. Ludwig Spaeth. (Single.) Panicle long; individual flowers large, dark purplish red; distinct; superb. The finest of its color,

President Grevy. (Double.) A beautiful blue; individual flowers very double and very large. The panicle is magnificent and measures 11 inches in length and 5 inches across. One of the finest Lilacs.

Japanese (*S. japonica*; Tree Lilac). A new species from Japan that makes a tree 20 to 25 feet high. Foliage large, very dark green, glossy and leathery. Flowers white, in immense clusters, about a month later than the common sorts.

QUINCE, Red-flowering (*Cydonia japonica umbilicata*). Large, brilliant red blossoms appearing in early spring in great profusion. Foliage bright green and glossy all through the summer. Of straggling growth, but can be pruned to desirable shape without injury. Sufficiently thorny and strong to make a valuable hedge, and its beautiful flowers make it very handsome for that purpose. Ultimate height 5 to 6 feet.

SNOWBALL, Common (*Viburnum sterile*). A well-known shrub of large size, with globular clusters of pure white flowers in the latter part of May. Ultimate height 8 feet.

Japanese (*V. plicatum*). This Japanese variety of the old-fashioned Snowball is one of the most valuable of our hardy shrubs. It forms an erect, compact shrub 6 to 8 feet high; blooms in June and for a long time is a solid mass of white. The plants are completely covered from the ground to the top of the branches with large balls of flowers as white as snow.

Opulus (High Bush Cranberry; *V. Opulus*). Handsome and dense foliage; flowers white, in drooping flat cymes, in May, followed by brilliant scarlet fruit in showy pendulous bunches, that remain on the plant all winter. Ultimate height 8 feet.

SPIRÆA Bumalda, Anthony Waterer.

Dwarf grower, attaining about 24 inches in height. Fine for edging or planting in front of shrub groups. The flowers are a magenta-red at first, fading afterward to a deep pink. It blooms about the end of June and if the flowers are cut off as fast as they commence to wither, there will be a continuance of them throughout the season to some extent.



President Grevy Lilac



Spiraea Vanhouttei

FLOWERING DECIDUOUS SHRUBS, continued

Spiraea aurea Golden-leaved Spirea). Flowers fine, white; foliage of a beautiful golden color which gives variety to the group planting. Blooms in June; grows to about 24 or 36 inches high.

callosa alba. Same as Anthony Waterer except flowers are white.

prunifolia (Bridal Wreath). Very beautiful; double flowers like white daisies covering the plant with a profusion of bloom in May. Ultimate height 5 to 6 feet.

Thunbergii. Profusion of small white flowers in early spring. Forms a rounded, graceful, dwarf bush. Foliage fern-like, branches slender and somewhat drooping. Ultimate height 4 to 5 feet.

Vanhouttei. One of the very best of all shrubs. Succeeds well in almost any location. Plant pendulous, yet upright, giving a most graceful appearance even when not in bloom. Flowers pure white and borne in dense clusters along the whole length of the branches, often weighting them to the ground. One of the most ornamental shrubs we offer. Excellent as a single specimen or in grouping with other shrubs; also a fine hedge plant. Blooms in early May. Ultimate height 5 to 6 feet.

SYRINGA, Garland (*Philadelphus coronarius*). The well-known Mock Orange. Pure white, sweet-scented, orange-blossom-like flowers in June. Ultimate height 8 feet.

Golden (*P. aurea*). A very pretty plant of medium size with golden yellow foliage. It retains its color the entire season and is valuable for creating pleasing and striking contrasts with both green and purple-leaved shrubs. Ultimate height 3 to 4 feet.

Lemoine's (*P. Lemoinei erectus*). A charming variety of upright growth, flowers small, yellowish white, fragrant, more clustered than the older sorts, completely covering the bush. Ultimate height 4 to 5 feet. May and June.

TAMARIX africana. A very beautiful shrub or small tree, with very fine feathery foliage somewhat like the juniper. This sort has light pink flowers in small racemes, which appear toward the first of June. A valuable sort for near the seashore or in sandy soils where others do not do well. Thrives in the very spray of salt water. Ultimate height, 12 to 15 feet.

hispida. Somewhat similar to above, except that the tip ends of the branches come into bloom with a beautiful pink effect in midsummer, which, contrasting with the feathery green of the remainder of the bush, makes a beautiful effect. Ultimate height 12 to 15 feet.

Fruit and Ornamental Trees for the Northwest

FLOWERING DECIDUOUS SHRUBS, continued

WEIGELA rosea (*Diervilla rosea*). An elegant shrub, with fine, rose-colored leaves. Introduced from China. Quite hardy. Blooms in May. Ultimate height 5 to 6 feet.

Hybrida, Eva Rathke (*D. hybrida, Eva Rathke*). Similar to *D. Van Houttei*, only better. Rich carmine-colored blooms in great profusion. June. Ultimate height 3 to 4 feet.

Variegated (*D. nana foliis variegatis*). Leaves bordered with yellowish white, finely marked. Flowers bright pink and borne in great profusion. June. Ultimate height 3 to 4 feet.



Hedge of California Privet

Hedge Plants

No other single item in decorating grounds has as much to do with the effect as hedges. You can spend \$25, \$50 or even \$100 in buying and planting a hedge that will easily add four times that amount in the cash value of your place. Requiring little attention, it grows in value and beauty from year to year and is one of the most satisfactory investments you can make on your place. The varieties listed below are especially recommended.

PRIVET, Amoor River North (*Ligustrum amurense*). Exceedingly hardy. Thrives well in Montana, Wyoming, or similar places where even the hardy common Privet fails. Leaves small, bright green; plant very bushy and stands shearing well.

California. Beautiful bright green; bushy habit of growth. Not recommended where temperature gets below zero.

Common. Hardy; dense grower; bluish green tint. Very desirable. Stands shearing well.

In Planting Privet, set two rows, 1 foot apart, plants a foot apart in the row. Set in "staggered" fashion, or alternately. Plant about 6 inches deeper than where they stood in the nursery row and cut back to 2 to 3 inches from the ground. This will cause heavy, dense growth from the ground up.

BARBERRY, Thunberg's and **Japan Quince** are also used to some extent for hedge purposes. Barberry makes a particularly desirable hedge, growing rapidly and forming a dense thorny barrier. In winter it has many bright red berries.

Please note that Thunberg's Barberry does not harbor wheat rust like the common Barberry of the East; therefore it can be used anywhere with perfect safety.

Climbing Vines

Equally ornamental on walls and terraces, on stables, on the mansion, or on the humblest cottage. They grace the garden walls and take from stiff and hard lines their ugliness by fresh foliage, pretty flowers, and, often, pleasing fruit. Invaluable for covering trellises, walls, cottages, etc. No porch can be entirely comfortable without some climbing vine.

AMPELOPSIS Engelmännii. Exceedingly hardy. Clings to brick or stone. Large leaves, bright green turning to brilliant red in fall.

Veitchii (Japan Ivy; Boston Ivy). A beautiful, climbing plant of Japanese origin. Leaves a little smaller and more ivy-like than Virginia Creeper. This is one of the finest climbers we have for covering walls, as it clings firmly to the smoothest surface, covering it with overlapping leaves which form a perfect mass of foliage. Not recommended for planting east of Cascade Mountains.

quinquefolia (Virginia Creeper; Old-fashioned Woodbine). A native vine of rapid growth, with large leaves and rich coloring in fall. The blossoms, which are inconspicuous, are succeeded by handsome dark blue berries. Like the bignonia and ivy, it throws out tendrils at the joints; by this it fastens itself to any wood it touches.

BIGNONIA capreolata (Trumpet Vine). This is a high climbing shrub, clinging by rootlets. It should be grown on posts, stumps, etc. Strong, rapid growers.

CLEMATIS (Virgin's Bower). Clematis plants of the improved sorts are exceedingly hardy, slender-branched, climbing shrubs of marvelously rapid growth and handsome foliage, which produce beautiful large flowers of various colors in great abundance, and during a long period. They do best in a rich soil in a sunny situation.

coccinea. Small, bell-shaped red blooms.

Henryi. This is the finest of all white Clematises, and should find a place in every collection. It is not only a vigorous grower, but is a remarkably free and continuous bloomer, beginning with the earliest and holding on with the latest.



Clematis paniculata



Hall's Japan Honeysuckle

CLIMBING VINES, continued

Clematis Jackmannii. This is, perhaps, the best known of the fine perpetual Clematises, and should have credit for the great popularity now attending this family of beautiful climbers. The plant is free in its form of growth, and an abundant and successful bloomer, producing flowers until frost. The flowers are large, of an intense violet-purple color, remarkable for its velvety richness. Blooms July to October.

Mme. Edouard Andre. This is the nearest approach to a bright red Clematis, and has been called the "crimson Jackmanii." The plant is a strong vigorous grower and very free in bloom. Color a distinct crimson-red; a very pleasing shade and entirely distinct from all other varieties.

paniculata (Sweet-scented Japanese Clematis). Very rapid growth, quickly covering trellises and arbors with handsome, clean, glossy green foliage. The flowers are of medium size, pure white, borne in immense sheets and of a most delicious and penetrating fragrance. Blooms in September, at a season when very few other vines are in bloom.

Ramona. Similar to *C. Jackmanii*, but flowers of a bright blue.

HONEYSUCKLE, Chinese Twining (*Lonicera japonica*). A well-known vine, holding its foliage nearly all winter. Blooms in July and September; very sweet. Red and white blossoms.

Hall's Japan (*L. Halliana*). A strong, vigorous evergreen variety with pure white flowers, changing to yellow. Very fragrant. Covered with flowers from June to November.

Monthly Fragrant (*L. belgica*). Blossoms all summer; flowers red and yellow; very sweet; rapid grower.

Scarlet Trumpet (*L. sempervirens*). A strong grower, and produces bright scarlet, inodorous flowers all summer.

IVY, English (*Hedera helix*). A well-known old and popular sort. Should be planted on the north side to avoid exposure to the sun and consequent sunburn.

VIRGINIA CREEPER (*Ampelopsis quinquefolia*). See page 40.

WISTERIA, Purple (*Wistaria sinensis*). A most beautiful climber of rapid growth, producing long, pendulous clusters of pale blue flowers. When well established, makes an enormous growth. It is very hardy, and one of the most superb vines ever introduced. Both the purple and white Wisterias are superb vines for porch screens, covering trellises or old trees.

White (*W. sinensis alba*). Similar to above except white, and rather tender.

Miscellaneous Bedding Plants

Dahlias

Few cultivated plants have such a wide range of color as the Dahlia. It is a favorite generally on account of its fall blooming proclivities and on account of its cheapness. Massed in corners, or backgrounds its beautiful bright-colored blooms, supported on tall, stiff stems, furnish a touch of color much needed in autumn when so few flowers are in bloom. We offer the two most popular types, the Cactus and Decorative.

Planting. The following directions from Bailey's "Cyclopedia of Horticulture" are authoritative:

"Plant large, strong roots about two weeks before danger of frost is over. Young plants and small roots should be planted about three weeks later, or after all danger of frost is over. Lay the tubers on their side about twice or three times their depth."

Tillage. Thoroughly stir the soil to considerable depth and enrich it if it is not already rich. This allows the roots to go down deep after the moisture more readily during dry weather. During its early stage of development, the Dahlia grows very rapidly, and should be kept thoroughly tilled. But while deep tillage is beneficial during its early stages of development it is almost fatal to the production of flowers if practised after the plants come into bloom.

Position. Dahlias are easily destroyed by high winds unless placed in a protected position or well staked.

Storing the Roots. As soon as the plants are killed by frost, lift the roots, and, after removing all the soil possible from them allow them to dry in the air for a few hours, when they should be stored in the cellar or some other cool place secure from frost.

Replanting or Dividing the Roots. As the eyes are not on the tubers, but on the crown to which the tubers are attached, care must be taken that each division has at least one eye, otherwise the roots will never grow. A little study will show you how to divide the tubers.



Cactus Dahlia

Cactus Dahlia, characterized by long, narrow, twisted, pointed petals. This is undoubtedly the best known and most popular of the various types of Dahlias.

Decorative Dahlia. Excellent for cut-flowers. Characterized by its strong, erect growth and its very large, loosely formed flowers on strong, stiff stems far above the foliage.

We can furnish the four primary colors in each of the above types—Pink, Red, White, and Yellow—in first quality, blooming size tubers.



Border of Peonies

Peonies

The gorgeous, dazzling Peony is one flower which should be planted more extensively than it has been in the past. It is descended from *Paeonia albiflora*, a native of Siberia, and is the one flower for the Northwest, for it stands any kind of weather without injury. Being absolutely hardy, flowering in greater profusion each succeeding year, and being pest- and disease-proof, it deserves to be widely planted.

Peonies will not reproduce typical blooms the first season, many fine double varieties throwing single or semi-double flowers, and it is not till the third year that the finest flowers are produced. Each succeeding year adds to the beauty of the flowers.

For Memorial Day Peonies are grown in large quantities, and there is seldom enough to supply the demand at good prices. Nothing is more suitable for social functions, weddings, and church decorations. For home and table decorations they are splendid and last in water longer than most other flowers. Their delicate perfume scents the whole house. By placing the buds in cold storage they may be kept in first-class condition for three or four weeks.

When Planting. Plant so that the eyes will be from 2 to 3 inches below the surface.

Culture. While they require practically no care, yet they will abundantly repay good care and nourishment. However, do not put manure too near the roots nor cover the crowns of the plants in winter with it. As the roots go straight down the soil can be cultivated around them and fine, well-rotted manure worked in with the soil.

The following list is not so long as to be confusing, but comprises some of the best standard sorts, all of which are first class and sure to please. No mistake will be made in planting liberally from this list.

Duke of Wellington. Large, globular flowers, with white guards and sulphur center. Fragrant. Medium tall, vigorous grower; free bloomer. Late.

Felix Crousse. Large; globular; rich, even, brilliant, dazzling, ruby-red. Strong vigorous grower; medium height. Free bloomer. One of the best red varieties. Especially fine for cut-flowers.

Fruit and Ornamental Trees for the Northwest

PEONIES, continued

- Festiva Maxima.** Very large, globular, rose type. Pure white center, prominently flecked crimson; outer petals sometimes faint lilac-white on first opening. Very tall, strong, vigorous grower. The finest white Peony in existence. With us it usually blooms from about May 1 to 25.
- Floral Treasure.** Very large, showy, rose type; pale lilac-rose; fragrant. Strong, tall, upright grower; free bloomer. One of the best for cut-flowers. Midseason.
- Gigantea.** Enormous flowers 8 to 9 inches across, of an exquisite shade of clear pink. One of the best.
- La Perle.** Very large, compact, globular, rose type. Deep lilac-white, blush center, prominently flecked with carmine. Fragrant. Tall; extra strong; free bloomer. Midseason. Extra good.
- L'Eclatante.** Very large; compact; brilliant red. Medium height; extra strong. Midseason. Extra good.
- Marie Lemoine.** Large, very compact, rose type. Pure white with cream-white center, occasional carmine tip. Fragrant. Medium height, extra-strong stem. Extra-good commercial variety. Follows Festiva Maxima.

Daisies, Shasta

Chrysanthemum maximum hybridum

Originated by Luther Burbank, from whom we secured our supply. A marvelous combination of size, grace, abundance, and general effectiveness of flowers, which are borne on long, clean, strong stems. Snowy white or cream colored, 4 to 5 inches across.

Iris germanica (German Iris)

The true Fleur-de-Lis, the national flower of France. They are perfectly hardy, thrive anywhere, grow and blossom luxuriantly, particularly if plentifully supplied with water or if planted in moist situations, as on banks of ponds, etc. Plants well established produce from 50 to 100 spikes of bloom, deliciously fragrant and fine for cutting. In beauty, the flowers rival the finest orchids, colors ranging through richest yellows, intense purples, delicate blues, soft mauves, beautiful claret-reds, white, primrose, and bronzes of every imaginable shade.



Planting of German Iris



Gold Medal and Other Roses

From the dawn of history the Rose has reigned as the queen of flowers, and until time shall end it will so continue. Immortalized in art and song, its beauty and fragrance the theme of the poet, symbolized in sacred literature, and endeared to countless generations through the tender associations of love and home, it will always claim the devotion of mankind as does no other plant creation.

Henry Ward Beecher says of the Rose: "The sweetest thing that God made and forgot to put a soul in is the rose." To this we heartily say, "Amen!"

Although to our foreign friends, with their painstaking care and love of the beautiful, must still be given the credit for developing many of the newer types, it remains for the Pacific Coast to bring most of these to their greatest perfection. The interest in Rose-culture extends everywhere, and now the arid and irrigated regions are growing most magnificent specimens, vying with the more humid climate of the coast section in the perfection of plant and bloom.

No shrub or flower responds so readily to a little care and attention and returns such an abundance of beauty and fragrance through so long a period as does the Rose. Not a lot so small or acre so broad but the Rose must be the crowning feature.

Rose-growing is not an expensive luxury, neither does it require great labor. No other flower can be so well afforded by rich and poor alike. It adds charm and attractiveness to the humble home of the lowly as well as to the mansion of the aristocrat.

The following list, while not so long as some, comprises the best of the old standard sorts as well as the cream of the newer introductions. Much time has been given to the selection of varieties that would suit the wide range of tastes that must necessarily arise from as extended a field as we cover. We have carefully considered the milder coast climate, also the more severe climate east of the Cascades, and believe you will find that our list includes the best-known varieties, adapted to both sections.

Not Hothouse Grown. Do not confound our choice two-year field-grown stock with the small, tender hothouse plants offered at low prices. Such plants always prove a disappointment, and besides, if they do live, you have to wait two years before getting a bloom.

Blooms the First Season. Our plants are hardy, field-grown, two-year stock, well rooted, and will *bloom the first summer*. It pays to get the best always.

We Pay Transportation Charges. Remember that our prices cover charges prepaid to destination. We pack carefully and guarantee stock to arrive in good condition.



Marechal Niel Climbing Rose (See page 54)

ROSES, continued

Planting Hints. The simplest and easiest way to prepare the bed is to spade the soil deeply, mixing with it a good supply of well-rotted stable manure. See that the ground drains well, and in sections east of the Cascades try to secure a position somewhat shaded, for the bloom fades out too quickly if exposed to the hot, glaring sun the entire day. Plants should also be somewhat protected from the fierce, driving winds sometimes found in these sections.

If Dry Upon Arrival. If, through unusual delay, the plants appear dry upon arrival, dig a trench, laying the bushes down flat singly in the trench, covering well with earth, both root and top, to a depth of 3 to 4 inches. Soak well with water and leave two or three days, then dig them up and plant. It is surprising how this will revive them.

Do Not Expose to Wind and Sun before planting, as this quickly dries out and impairs the vitality of the plant. Keep well covered with damp burlap or set the plants in a bucket of water while planting.

Do Not Let Manure Come in Contact with the Roots or the Top; it will burn or damage the plant. Keep the soil well cultivated.

How to Prune. Before planting cut back the tops to about 6 inches, leaving one to three prongs. Cut back the roots somewhat, trimming off the bruised or broken ends. A fresh cut callouses quickly. Each succeeding year cut out all dead wood in the early spring as soon as the frost is out of the ground, and leave three to five of the strongest shoots of last year's growth, but cut these back to 8 to 12 inches from the ground. The stronger-growing shoots should be cut back to 12 inches and the weaker ones to 8 inches. This applies more particularly to the vigorous growing Hybrid Perpetuals. The Hybrid Tea Roses should be pruned lightly, shortening the strongest shoots to 4 to 6 inches. With Rambler or Climbing Roses, remove the dead shoots and thin out the tall shoots, cutting back when necessary to within 3 inches of the base. If your Roses are budded instead of "own-root" Roses, then watch out for wild Rose suckers which come from below the surface. These must be removed when they appear or they will soon grow up and smother the plant, rendering it practically worthless.

Pests. For aphids, cultivate the ground well, sprinkle the plants with tobacco dust or insect powder, after which spray with water. Or they may be readily controlled by early spraying with an Ivory soap solution (an eight-cent cake to eight gallons of water), the standard kerosene emulsion diluted with twelve to fifteen parts of water, or a tobacco preparation such as Black-Leaf 40. Be sure to spray early before the plant-llice become abundant. Pick off by hand the caterpillar or rose grub.

Fruit and Ornamental Trees for the Northwest

ROSES, continued

Winter Protection. Experience has shown that the best protection for Roses is the soil. Before the ground freezes in winter draw up well around the plant the surrounding soil, at least one-third or half its height. If the variety is rather tender, cover the plant entirely. Remove in the spring as soon as the frost is gone from the soil.

Budded Roses vs. Roses on Their Own Roots. For the average amateur planter we cannot too strongly recommend the planting of "own-root" roses. Very few will notice the wild Rose growth which comes as "suckers" from the budded Roses, consequently it is apt to kill the remainder of the plant in time. Furthermore, we have found that as a general rule the "own-root" Roses are hardier. Of course, there are some varieties that do not do well on their own root and have to be budded. All Roses of our own growing, however, are "own-root" stock, but when we occasionally buy elsewhere we sometimes get budded Roses.

Abbreviations Used To Designate the Various Classes of Roses

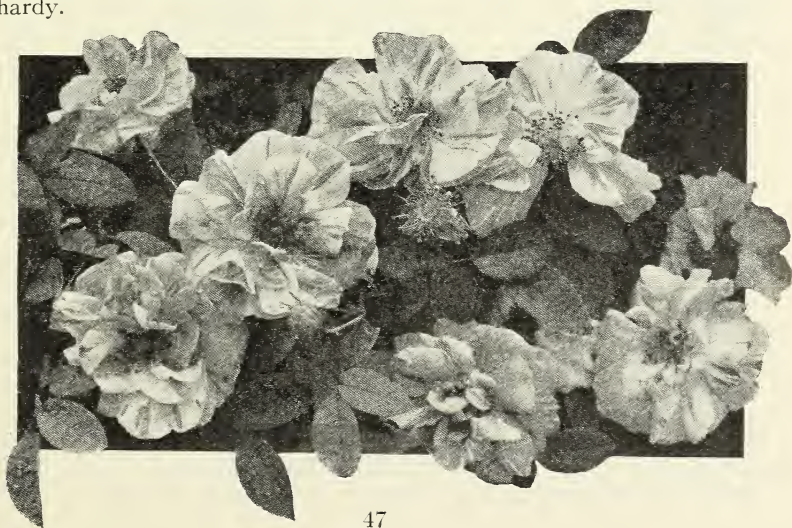
H.P., Hybrid Perpetual. Hardy, vigorous and easily grown. Though called perpetual they are not such free bloomers as the Hybrid Teas and Teas, but bloom only at intervals during the summer and fall. Recommended for planting in any section east of the Cascades and in the higher elevations wherever Roses can grow.

H.T., Hybrid Tea. A cross between the hardy Hybrid Perpetuals and the deliciously scented Tea Roses. Not so hardy as the Hybrid Perpetuals, but freer bloomers and more fragrant. This is the so-called "monthly blooming" class. Not recommended for planting where winter temperature gets below 15 degrees below zero, unless one is prepared to give extra winter protection.

T., Tea. These are the favorites where they can be successfully grown on account of their everblooming qualities, fragrance, delicate colors, and fine forms. Good for growing indoors in winter. Not hardy and recommended only for the milder sections west of the Cascades.

Poly., Polyantha. Delightful for massing in beds, or as edges for borders or beds of taller growing Roses. Their small, neat flowers are produced in large clusters, entirely covering the plant, through the summer and fall. They are useful for indoor as well as outdoor growing. Will grow wherever the Hybrid Perpetuals will grow.

Wich., Wichuraiana Roses and Their Hybrids. An almost ever-green type that creeps along the ground and covered, when in bloom, with immense bunches of single Roses. Some of them, such as Dorothy Perkins, are double, are good climbers and very beautiful. Exceedingly hardy.



Fruit and Ornamental Trees for the Northwest

ROSES, continued

Per., Pernetiana. A new race originated by Pernet-Ducher, famous rosarians of France, and which is becoming very popular, being absolutely hardy and free blooming.

Gold Medal. Those marked "Gold Medal" have taken the Gold Medal at the National Rose Show, London, not in competition with other Roses, but because they have reached a certain standard of merit. This Gold Medal is only awarded for unusual excellence and is in itself a sufficient guarantee of merit. You will notice our list comprises a great many of these.

Index to Roses

This index will give you quick and ready reference to color, and page for more complete description.

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Climbing Kaiserin Augusta Victoria	Cl.H.T.	White	54
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Yellow Rambler (Climbing)	Mult.	Yellow	54



Los Angeles Rose (see page 52)

Hybrid Perpetuals Roses

American Beauty. Vigorous grower; large globular blooms of deep pinkish red, shaded carmine; fragrant; fine. Free bloomer.

Duchess of Sutherland. (Gold Medal.) Erect and vigorous grower, with large, full, finely formed flowers on stout canes. Color, warm, rosy pink, with lemon-yellow shadings upon the white at base of petals. Very fragrant. A very promising sort.

Frau Karl Druschki (White American Beauty). Vigorous. This grand white Rose has become renowned as the very highest type of its class and the best snow-white Rose ever introduced. An extraordinary strong grower with the vigor and hardiness of the oak. Its magnificent flowers are nothing less than glorious. Beautiful, long, pointed buds, a pure white—the standard by which all other white Roses are judged.

George Arends (Pink American Beauty). This splendid new Rose bears some resemblance in growth and bloom to that famous hardy white Rose, Frau Karl Druschki. The flowers are of large and massive proportions, surmounting stout, almost thornless canes in a most imposing manner. The color is a delightful fresh and bright shade of pink with silvery suffusions. One of the most valuable varieties that have appeared for many years.

General Jacqueminot. Vigorous; brilliant velvety crimson; large, showy, and fragrant. Probably one of the most popular of the Hybrid Perpetuals. An old favorite.

Gloire Lyonnaise. Vigorous. Rich, creamy white, passing, when open, to a pale shade of salmon-yellow, deepest at the center. Absolutely hardy everywhere, should be planted freely. Blooms of immense size, full and double. Deliciously scented.

His Majesty. (Gold Medal.) Very vigorous. Sometimes called the Crimson Frau Karl Druschki. Produces blooms of immense size on fine, long canes as straight as arrows. Color, dark crimson shaded deep vermilion toward the edges. Of wonderful substance and depth of petal with high pointed center. One of the sweetest perfumed Roses in cultivation.

Hugh Dickson. Vigorous. Brilliant crimson, shaded scarlet; fine form; good size. Highly perfumed. Awarded the Nickerson Prize as the best red Rose in existence for general garden cultivation.

Fruit and Ornamental Trees for the Northwest

HYBRID PERPETUAL ROSES, continued

- Margaret Dickson.** (Gold Medal.) Of magnificent form; white, with pale flesh center; petals very large, shell-shaped and of great substance; fragrant. Foliage very large, dark green.
- Marshall P. Wilder.** Color bright cherry-carmine; fragrant; of good growth, with fine foliage. One of the freest of the Hybrid Perpetuals to bloom. We can recommend this Rose without hesitation.
- Mrs. John Laing.** (Gold Medal.) Vigorous. Hardly ever out of bloom all summer. Long buds; color a beautiful shade of delicate pink; of large size; very fragrant. A mighty fine Rose.
- Magna Charta.** Very vigorous. A general favorite on account of its strong, upright growth and bright, healthy foliage. Bright rose-pink; very large; of fine shape.
- Paul Neyron.** Very vigorous. The flowers are immense, probably the largest and finest Rose grown. Bright, shining pink, clear and beautiful; very double and full; finely scented. Blooms all summer.
- Prince Camille de Rohan.** Vigorous. One of the darkest red Roses. Rich, velvety crimson, changing to intense maroon. Celebrated the world over for its large, handsome, fragrant flowers, and the freedom with which they are produced. A very prolific bloomer and the flowers are of excellent size and form.
- Soleil d'Or.** (Austrian Briar.) Hardy. Varying in color from orange-yellow to reddish gold, shaded with nasturtium-red; conical shaped buds opening to large, attractive flowers. Free blooming and altogether very fine.
- Ulrich Brunner.** Extra vigorous. Very rich, cherry-red blooms, large to very large, full, of the best substance and very fragrant. The most perpetual bloomer of its class. Very hardy.

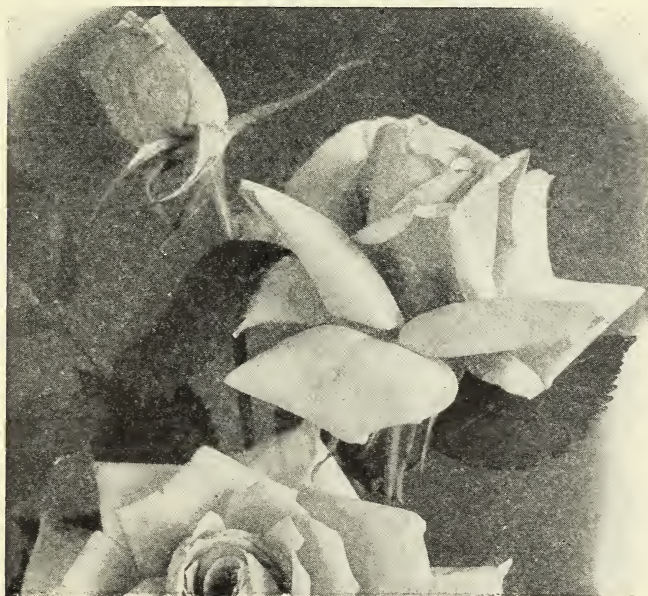
Hybrid Teas

- Betty.** (Gold Medal.) Imperial pink, a rare color; large; beautifully formed; high center; very free bloomer. Sometimes described as copery rose overlaid with golden yellow. Deliciously scented.
- British Queen.** H.T. (Gold Medal.) The finely formed flowers are very large, and open freely in all weathers. Color pure white, occasionally tinted with flesh. A new Irish Rose of great merit. One of the finest whites.
- Columbia.** It is a big Rose, the open flower measuring fully 6 inches across. The color is a true pink, deepening as it opens to glowing pink. A peculiarity of the variety is that the shades all become more intense until the full maturity of the open flower is reached and this color is enduring. The flowers are produced in long, stout canes high above the body of the plant. Received the highest award for the year 1919 from the American Rose Society in the Pacific Coast trial-grounds at Portland, Ore. A truly wonderful Rose.
- Edward Mawley.** (Gold Medal.) Beautiful dark crimson; perfect form; remarkably distinct. One of the finest and most beautiful red Roses ever introduced. Very free bloomer. Very hardy.
- Etoile de France.** Flowers are very large, borne on long, stiff stems. Color a beautiful shade of clear, velvety red-crimson; very fragrant. Color lasting. Free bloomer. Deliciously fragrant and one of the best red Roses.
- Gen. MacArthur.** Vigorous. Dark, velvety scarlet; large and full. Free bloomer and very fragrant. A great favorite on the Pacific Coast.
- George Dickson.** (Gold Medal.) The color is a velvety black-crimson, the back of the petals being heavily and uniquely veined with deep pure crimson-maroon. The petals are of splendid shape, of magnificent substance, delightfully smooth, and built to make the form of flower perfect. Wonderfully lasting. Free bloomer; extra good.
- Gruss an Teplitz.** This is a Bengal or China Rose, but is usually classed as a Hybrid Tea. Extra vigorous. Fiery scarlet-crimson, shading to rich velvety crimson. Very fragrant and a good decorative Rose. Profuse bloomer.

Fruit and Ornamental Trees for the Northwest

HYBRID TEA ROSES, continued

- Harry Kirk.** (Gold Medal.) Color deep sulphur-yellow, passing to lighter shade at the edges. Unique; perfect form; large; free bloomer.
- Hermosa.** (Bengal.) Vigorous. Very hardy. Always in bloom and always beautiful. Color pink. The flower is cupped, finely formed, and full. A great favorite.
- Hoosier Beauty.** The Rose *par excellence* for cut-flower purposes. Beautiful, long, pointed buds on very long stems, making it ideal for this purpose. Color a brilliant, dazzling red, shaded darker maroon. Without doubt one of the very best red Roses.
- J. B. Clark.** Color is unique among Roses, being deep scarlet shaded blackish crimson with rich bloom like a plum.
- Jonkheer J. L. Mock.** (Gold Medal.) New. Strongest grower of the Hybrid Teas. A mixture of rich bright pink, faced with carmine and salmon. Flowers very full and sweetly scented. Free bloomer and unusually good.
- Kaiserin Augusta Victoria.** Beautiful, large, pointed, elegant buds, followed by very large, full, double flowers; delicate creamy white; deliciously scented. Vigorous, healthy grower and constant bloomer. One of the best whites in this class.
- Killarney.** The finest pink forcing Rose ever introduced. The famous Irish Rose. Bush strong and upright, with beautiful, deep, bronzy green foliage. Buds long and pointed. Free bloomer and very fragrant. Color deep shell-pink, lightened with silvery pink. The base of the petals is a soft silvery white relieved with enough yellow to make it more attractive.
- Lady Hillingdon.** (Gold Medal.) New. Vigorous. Deep golden yellow; beautifully long-pointed buds; very free flowering and a splendid grower. A most beautiful and valuable Rose. Should be in every collection.
- La France.** Too well known to need description. Delicate, silvery rose-pink; very large and full; an almost constant bloomer; equal in delicacy to a Tea Rose. Very fragrant and fine.
- Lillian Moore.** No Rose ever has been offered to the public with the same credentials, it having won in strenuous open competition with Roses from all countries of the world the much-coveted \$1,000 Trophy offered by the Panama-Pacific Exposition, San Francisco, for the best new seedling Rose not in commerce. Color a deep, pure Indian yellow, with slightly deeper center; buds long. Free bloomer. A gem.



Kaiserin Augusta Victoria Roses

Fruit and Ornamental Trees for the Northwest

HYBRID TEA ROSES continued

Los Angeles. Strictly speaking this belongs to the Hybrid Briar class of Roses, but is classed with the Hybrid Teas. The buds are long and pointed, expanding into a flower of splendid size and form. The bloom is a luminous flame-pink, toned with coral and shaded golden yellow at the base of petals. Its intensely rich coloring, together with the heavy texture of the petals, keeps each flower handsome for a remarkably long time. It has a delicious Tea fragrance. It is a fine, strong grower, throwing up stout canes of splendid length and strong lateral growth which enables it to bloom so profusely. Unequaled as a garden exhibition Rose.

Lyon. Vigorous. Center coral-red with salmon and chrome-yellow shading, forming an indescribably harmonious and beautiful combination of colors. Very large flowers produced on stiff stems. A prize-winner wherever exhibited.

Mme. Caroline Testout. Vigorous. Clear, satiny pink; very large, full, and free blooming. A great favorite and most valuable. A sensation in the cut-flower market. Thrives exceptionally well in the humid atmosphere west of the Cascades.

Mrs. Aaron Ward. A new yellow Rose of great merit. The color is Indian-yellow, copper and gold, at times washed with salmon-rose. Flowers full and of great substance. Beautiful buds for cutting.

Ophelia. Salmon-flesh, shaded with rose; large and of perfect shape; of excellent habit, the flowers standing up well on long, stiff stems and produced in great profusion. Excellent for forcing and a fine decorative variety. Vigorous grower. Certainly a most glorious Rose.

Richmond. Vigorous. Pure blood-red; very fragrant; splendid grower, continuous bloomer and really one of the best red Roses for the garden ever introduced. Beautifully shaped buds, long and pointed on good, stiff stems. Keeps its color well even in hot weather.

Sunburst. A very vigorous grower of erect and slightly spreading habit, with very few thorns. Flowers large, fairly full, and of nice, elongated cupped form. The coloring is a superb cadmium-yellow, with orange-yellow center. Very fine.

White Killarney.

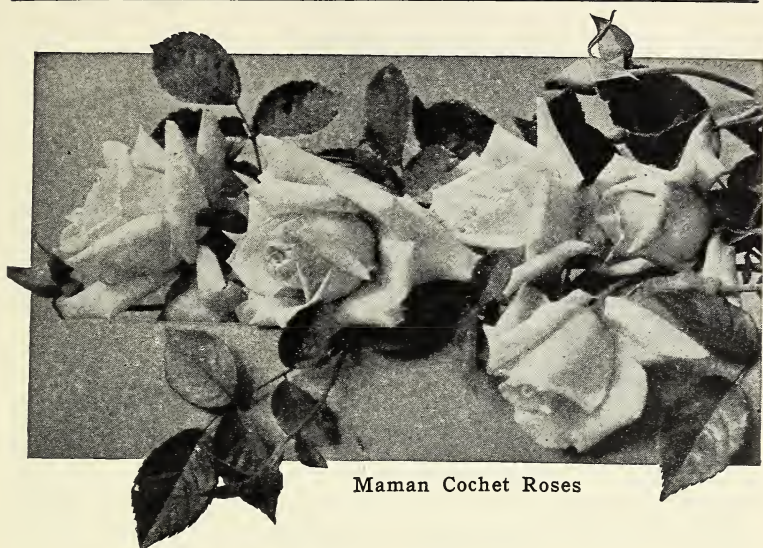
A pure white sport from the famous pink Killarney. Very slightly tinged with pink. Superior to its parent, and first class in every way. Be sure to try this one.

White La France.

This beautiful variety, with flowers of pure white, shading into a center of light rose, is a great favorite on account of its freedom of bloom, fragrance, and large flowers. A vigorous grower, producing a great number of buds and flowers. Fine for general garden culture.



Richmond Roses



Maman Cochet Roses

Tea Roses

Tender. Recommended for planting only in warmer sections west of Cascades. However, Tea Roses, are worth all the labor and time that you may devote to their care. The best way to protect them in winter is to dig a trench on one side of the plant, slightly loosen the roots, then tip the entire plant into the trench and cover with soil.

Maman Cochet. Buds long and shapely, borne on long, stiff stems. One of the largest Tea Roses; flower is built up or rounded, and very double. Highly prized for cut-flowers. Silvery pink, shaded with salmon-yellow. Superb.

Papa Contier. Vigorous. A grand red of fine, crimson shade and silken texture. The bud is of good size and graceful form, on good, long stem, making it very desirable for cut-flowers.

Safrano. Bright apricot-yellow, changing to orange and fawn, sometimes tinted with rose; valued highly for its beautiful buds. Fragrant and very free blooming.

Sunset. Flowers large, fine, full, and very double; deliciously perfumed. A remarkable shade of rich, golden amber, elegantly tinted and shaded with deep ruddy copper.

Polyantha or Baby Rambler Roses

A class of miniature Roses derived from the Climbing Polyantha. They are of dwarf habit and bloom so freely as to cover the entire plant with bloom all through the summer and fall. The plants are splendid for bedding or as edging for borders; absolutely hardy. Completely hide the plant with bloom from early till late.

Baby Rambler. This is the original Baby Rambler, daddy of them all. It is in bloom all the time. Flowers in large clusters of brightest crimson. Grows to a height of 18 inches and covers the plant with its bloom.

Cecile Brunner. Color salmon-rose. Undoubtedly one of the most beautiful and lovely of these delightful miniature Roses. Very fragrant and always in bloom. Florists sell them by the thousands as cut-flowers, being very popular for corsage bouquets.

Orleans. (Gold Medal.) Geranium-red, suffused with pink, white center—a charming combination. Hardy and a very strong grower; the flowers are very lasting and keep in fine condition on the plants for an unusually long time. The superb colorings, together with its tremendous blooming qualities, make it very popular.

Moss Roses

Always great favorites, for what can be more elegant than the bud of the Moss Rose, and more delightful than its fragrance? Perfectly hardy. We offer them in Pink, Red, and White.

Climbing Roses

Blue Rose (Veilchenblau). Cl.Wich. The easiest way to describe it is to say that it is a blue Crimson Rambler, bearing immense trusses of semi-double flowers. Color cornflower-blue.

Climbing American Beauty. H.P. Same color, size, and fragrance as American Beauty except it is a climber. Absolutely hardy and very free blooming. One of the very finest red climbers.

Climbing Kaiserin Augusta Victoria. H.T. Also known as Mrs. Robert Peary. The same beautiful long, pointed bud, and fragrant flower of the bush Kaiserin Augusta Victoria, except that this is a climber. Without a doubt the finest white climbing Rose.

Climbing Mme. Caroline Testout. H.T. Same as the well-known bush Testout, but of a climbing habit. Very fine.

Climbing Meteor. H.T. A very fine ever-blooming climber. Rich, velvety crimson. Extremely strong grower. In the extreme north it should be laid on the ground in winter and covered with leaves or straw.

Crimson Rambler. Cl.Poly. Bright crimson flowers, produced in large clusters of pyramidal form. Fine variety for pillars and arches. Also makes an attractive hedge if grown on a fence. A Rose for the masses.

Dorothy Perkins. Cl.Wich. Shell-pink flowers, borne in large clusters like Crimson Rambler. Very double, sweet-scented and very beautiful. Hardy. Foliage of a waxy green.

Excelsa, or Red Dorothy Perkins. Cl.Wich. It is a good deal to claim for a Rose, but we are within bounds when we describe Excelsa as a brilliant Crimson Rambler flower on glossy, varnished Wichuraiana foliage. The flowers are very double, produced in large trusses of thirty to forty, and almost every eye on a shoot produces clusters of flowers. The color is intense crimson-maroon, the tips of the petals tinged with scarlet. The finest of all the red ramblers.

Empress of China. Cl.Bengal. Bright pink, small, perfectly formed flowers in large clusters. Free-flowering and very hardy.

Flower of Fairfield. Cl.Poly. The everblooming Crimson Rambler. While not strictly an everblooming Rose, yet it does bloom over a longer season than the Crimson Rambler.

Mme. Alfred Carriere. Hb.Noisette. Pure white, suffused with yellow at base of petals; very free and very fragrant; fine for arches and pillars. West of the Cascades it grows to the roofs of two-story houses, covering the entire side or end of a large-sized house, and making it simply a wilderness of blooms. Quite hardy.

Marechal Niel. Cl.T. This is the old standby yellow Rose in the South and along the sheltered portions of the coast. Immense, deep golden yellow flowers with the deepest, richest tea fragrance of all Roses. Not recommended for planting east of the Cascades without plenty of winter protection.

Tausendschon (Thousand Beauties). Cl.Poly. The flowers upon first opening are the most delicate shade of pink ever seen in a Rose, might be described as a white, delicately flushed pink, changing to rosy carmine. It gets its name from its many flowers and the variation in coloring. Extra good.

White Rambler. Cl.Poly. Small flowers of pure white, produced in large clusters.

White Dorothy Perkins. Cl.Wich. This Rose has no rival as a white climber. Immense clusters of pure white blooms completely covering the bush which is hardy, and in every way similar to the regular pink Dorothy Perkins.

Yellow Rambler. Cl.Poly. Bright yellow blooms, changing to canary-yellow, produced in pyramidal clusters of fifty or more.

Spraying Calendar

WASHINGTON EXPERIMENT STATION, PULLMAN, WASH.

A. L. MELANDER, *Entomologist*

R. KENT BEATTIE, *Botanist*

This applies broadly to all parts of the Northwest.

There is no spray that will cure everything. Use the ones that fit your case. For information about insect pests, plant diseases, and spraying, write to the Botanist or Entomologist of the Experiment Station, Pullman, Washington.

FALL

Just after the leaves fall. Especially for western Washington

What to Use	What to Spray for	Notes
Sulphur-lime 3 degrees Beaumé.	Apple cankers. Scale insects. Eggs of green aphids and red spider. Pear-leaf blister bite. Woolly aphids. Eggs of tent caterpillar. Moss and lichens. Rabbits and field-mice.	This spraying may be preceded by a spraying of bordeaux as soon as crop is picked; for canker only. Write for bulletin on sulphur-lime spraying.

WINTER

While buds are swelling. Usual spraying where there is no canker

What to Use	What to Spray for	Notes
Sulphur-lime 3 degrees Beaumé.	Bud moth; twig borer; peach-leaf curl. Scale insects. Eggs of green aphids and red spider. Pear-leaf blister mite. Woolly aphids. Rabbits and field-mice. Mildew.	Too early spraying will miss these. Write for bulletin on sulphur-lime spraying.

SPRING

(1) When flower buds are ready to open. (2) While last blossoms are falling.

What to Use	What to Spray for	Notes
Sulphur-lime.	Apple scab. New York apple canker.	Spray when central flower of cluster is about to open.
Lead arsenate, 1 lb. to 50 gals.	Prune brown-rot or fruit-mold. Codling moth.	Use a bordeaux nozzle with a crook and spray with force from a raised platform, directly into every flower. Repeat immediately. If so applied, these sprayings are sufficient. Keep a few trees banded. If many worms are trapped, spray. Write for Codling Moth Bulletin.
Sulphur-lime 1.5 degrees Beaumé.	Apple scab. New York apple canker. Bud moth; twig borer. Caterpillars.	Not advisable to mix with arsenate of lead. Omit if there is little scab.

Fruit and Ornamental Trees for the Northwest

SPRAYING CALENDAR FOR SPRING, continued

When pest appears

What to Use	What to Spray for	Notes
Tobacco (or kerosene emulsion).	Aphis (cherry aphis), etc., woolly aphis on branches, red spider, Oyster-shell barklouse. Leaf-hopper.	About June 15 for newly hatched young. Spray early before they acquire wings.
Lead arsenate.	Pear and cherry slug. Caterpillars. Colorado potato beetle.	Use 1 lb. to 75 gallons or dust with lime, ashes, or road dust. Use 1 lb. to 40 gallons.
Sulphur-lime 1.5 degrees Beaumé.	Fruit spot (Baldwin spot; punk rot). Mildew. Red spider; young of oyster-shell bark louse.	Early in July. (Treatment in experimental stage.)
Asa strong wash. Bordeaux.	Trunk borer; flathead borer. Flea beetles. Cutworms. Grasshoppers. Potato blight.	Keep trunk coated all summer, best to add excess lime. As a repellant. July 1-15; repeat in two weeks. If much blight nearby, give third application two or three weeks later.

Pests Controlled by Other Remedies than Spraying

Pear Blight (fire-blight of pear and apple)—

Prune out every sign of blight, cutting well below the disease. Swab every cut with corrosive sublimate (1 to 1,000 water). Clean the tool often with carbolic acid or you will spread the blight with each cut.

Western Tomato Blight—

Set out strong plants close together, or plant the seed thickly in the rows. Give best of care, shade, and plenty of water. You will probably lessen the blight.

Potato Scab—

Soak seed for two hours in formalin. 1 lb. to 30 gals. water, then cut and plant. Do not plant in soil where scabby potatoes were grown.

Smut of Wheat and Oats—

Spray the seed thoroughly with formalin, 1 lb. to 45 gallons water. Cover and let lie in a pile two hours. Dry and plant with a clean seeder.

Root Maggot of Radish, Turnip, Cabbage, Etc.—

Spray soil with carbolated lime before maggots appear. Repeat often. Cultivate well after crop is removed. Place a 3-inch tarred paper collar on young cabbage plants.

Cabbage Worms—

Paris green 1 part, bran 40 parts. Mix well. Dust the plants before worms eat in.

Climbing Cutworms, Garden Cutworms—

Paris green 1 part, bran 40 parts. Make a mash by adding water. Season with a little molasses, stale beer, or salt. Scatter by spoonfuls before planting or among plants.

Woolly Aphis on Roots—

Expose the roots as much as practicable and spray with tobacco, kerosene emulsion or sulphur-lime. Root treatment is not completely reliable.

For Nursery Stock—

Use 1 oz. cyanide to 100 cu. ft. For grafts and scions, use two-thirds oz. cyanide to 100 cu. ft.

To every ounce of pure potassium cyanide (poison) add 1 ½ liquid ounces sulphuric acid diluted with 2 ½ ounces water. The gas generated is extremely poisonous. Fumigate 30 to 45 minutes.

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39 boxes of Rainier Apples picked from this 19-year-old tree, and 800 boxes picked from the 21 Rainier trees same age, comprising this orchard, all picked in the summer of 1920 following the unusually severe winter of 1919 when the December temperature fell to 30° below zero.

RAINIER

The Wonderful Keeper—The Dessert Apple Supreme

Here's what leading authorities say:

"The keeping qualities of the *Rainier Apple* are unsurpassed by those of any other variety of the Pacific Northwest that has yet come to the attention of the U. S. Department of Agriculture. Its ability to retain its firmness, brightness and quality, with almost no decay or skin blemish, places it above even the Arkansas Black, Winesap, and Yellow Newtown. In 32° Fahr. cold storage it keeps in prime condition into May or later, and instances are known where large numbers of boxes have been held in excellent condition into September of the following year."—*Bulletin No. 587 of U. S. Department of Agriculture.*

"The fruit is oblong and slightly inclined to conical. Flesh yellowish with practically no grain. Probably better described as 'buttery.' Quality much resembling the Delicious, but a much better storage Apple. Fruit picked during October, 1912, was placed on the table at the banquet of the International Refrigerator Congress, Chicago, in September, 1913, in perfect condition. Scale is unknown; decay practically so. Eating quality seems to improve rather than deteriorate. The tree is a vigorous grower and is inclined to be spreading, therefore capable of bearing a heavy crop."—*Lowther's "Encyclopedia of Practical Horticulture,"* Vol. I, page 221.

The quality is excellent, mild yet not sweet, with no acidity, making it an ideal Apple for those who are unable to eat the regular varieties. Doctors describe it as "neutral" in its action on the stomach. See description on page 7.